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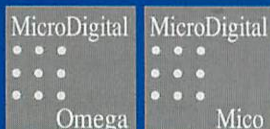


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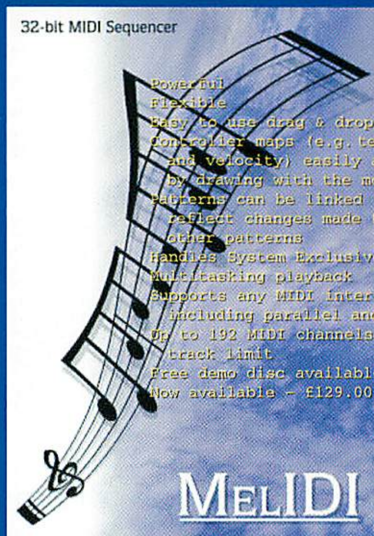
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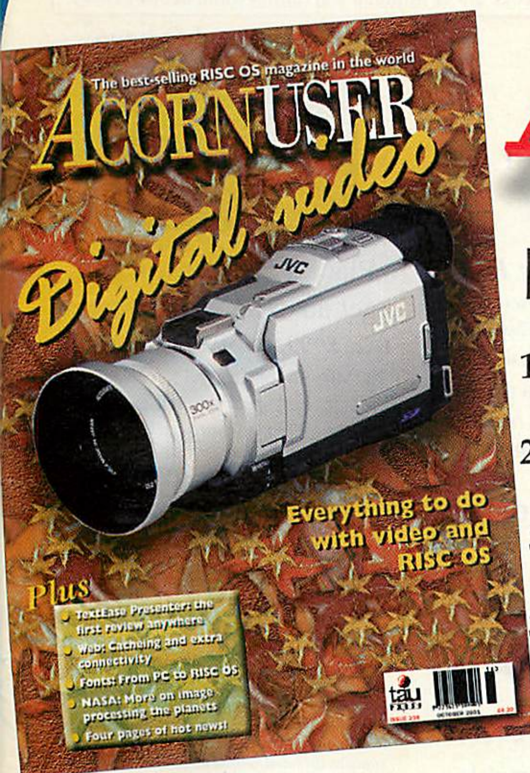
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Features

Regulars

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Hindsight is 20:20 (or, at least, we can pretend it is) but looking forward into the future, while more fraught with error, can be rather more fun.

Look at it this way: There are a wide variety of different futures and we just need to choose the one we prefer and work for that one – I can't say that I'm one for letting destiny do what it wants.

So what futures do we have? Things are not currently going well for Microsoft and the PC market as a whole. The honeymoon (and it was one long one) is over. Microsoft is no longer viewed as a friend.

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Small items (under 2Kg).....no more than £6 + vat
One box of items totalling upto 25kg...£6.50 + vat
Computer systems..................................£13 + vat
All prices are correct going to press. E&OE
All goods are fully guaranteed but not supplied on approval.

RISC OS SELECT

Selection

There has been much speculation but at last the contents of RISCOS Ltd's new offering, RISC OS Select, otherwise known as RISC OS 4+, has been revealed as more than a simple list of wishes and RISCOS Ltd have done exactly what every successful company must do — they have listened. As one aspect of RISC OS 4+ after another was demonstrated at the RISC OS Press Conference my overwhelming thought was: "That's just what we wanted."

Many of the changes in Select are small but together they make RISC OS 4+ a clearly more responsive and intuitive operating system.

So what is Select? Essentially it's a new version of the RISC operating system for current users of RISC OS 4.02. It's different in the way that it is to be distributed. Typically operating systems are sold after years of development and represent a big change from the previous version.

Acorn/RISC operating systems were always produced on ROM so there was a significant material cost in its production. In general upgrading operating systems goes hand-in-hand with needing a new machine to run it on. Unlike Acorn, RISCOS Ltd don't produce hardware but they have developed, and are developing, RISC OS 4.

What to do? Producing ROMs would be expensive and would freeze the new version of the operating system at the date the ROMs were produced. Instead they have decided on a novel (for RISC OS) means of supplying the OS. It won't be in a ROM but on a CD and, rather than a receiving a single CD, the purchaser will receive CDs produced at regular intervals throughout the year.

Producing RISC OS 4+ in this way means that problems identified after the first release can be modified in time for the second release and so on. In essence each CD will include some release modules (judged safe to use) and beta-modules (use/test at your own risk); where one CD includes a beta version the next is likely to include the release version or the previous beta.

There are both positive and negative views of this form of release but there is a basic fact that must be borne in mind: RISC OS Ltd have looked at the alternative means of supplying RISC OS 4+ and the Select scheme is the only viable one. If you want RISC OS 4+ (you probably will) you will obtain it through Select.

There have been criticisms of them supplying the OS on CD because the consequent soft-loading of RISC OS 4+ will add time to the boot-up sequence; it will, but the good news is that this is only about 5 or 6 seconds. The advantages of the system include the chance to improve (and debug) modules in months (for the next CD) instead of having to wait three or more years between full OS releases.

Should major faults occur, though they aren't expected, the remedy can be distributed even faster over the RISCOS Ltd Web site. All OS releases include problems, testing on a range of 25 machines can't possibly reveal possible difficulties from every combination of hardware, but the Select scheme offers the best possible option of properly dealing with such problems.

Does it mean that you become a beta tester for RISCOS Ltd? Yes and no. You don't have to run the beta versions if you don't want to. But who better than the dedicated RISC OS users to really put the software to the test?

Offerings

What does Select offer? Over the next two years (the current public planning horizon) RISCOS Ltd will publish an expected three CDs each year. The contents will include the kernel and modules of the OS together with a new, streamlined !Boot directory and associated applications.

The version of RISC OS 4 will advance over time but number designation changes will reflect changes to the kernel of the system and not just module changes; although the Select release has been touted as v4.5 (as half-way to RISC OS 5) its actual number at present is v4.23 and this may be the first released version.

RISC OS 4+ offers improvements which were produced by RISCOS Ltd in its work to produce v4.02, but not ready for release at that time, work at Pace and current development for RISCOS Ltd. Although RISC OS 4.02 is stable RISC OS 4+ will be even more stable. The kernel has been simplified and modules have been moved to

Are you missing your cover CD?

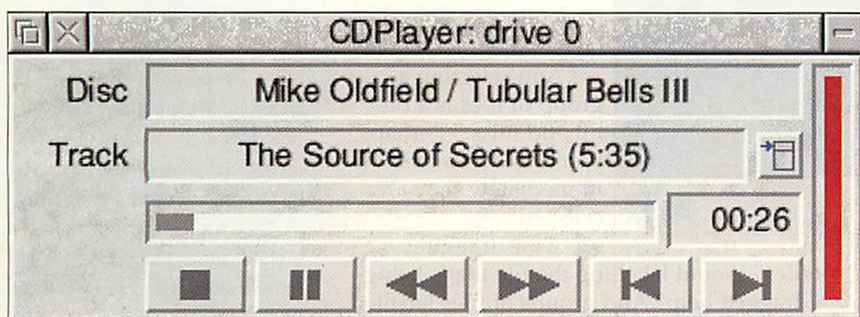
Following a survey of readers, *Acorn User* is implementing an exciting new scheme in regard to extra magazine-related electronic copy. Since switching to the cover CD the major problem has always been coordinating the magazine content with a CD that only comes out once in three issues.

From now on all magazine-related software or additional data will be made available via the *Acorn User* Web site – more than that, we are starting a new series of technical articles for all programmers that will be available only via the *Acorn User* Web site. Plus we will be adding extra goodies each issue to make the monthly offering even more value.

The October "Cover CD" has already been placed on the Web site so just go to **www.acornuser.com** and see what is available for you to download.

box





dynamic areas which can now be protected.

Moving modules from the kernel means that the system is easier to maintain and changes to modules won't need a complete new ROM build. The changes ensure that RISCOS Ltd can implement updates quickly and smoothly. All known bugs have been fixed with minor intractable but limited exceptions, for example long standing minor problems with too many interdependencies, but these are unlikely to cause problems.

RISC OS 4+ will be backwards compatible unless software relies on bugs. Developers will need to have a copy of the Programmer's Reference Manual as these PRMs will be followed. And before programmers complain — yes, the PRMs will be updated too. New documentation is being produced and will be published on the RISCOS Ltd Web site as soon as each section is available. Anyone needing early documentation for a particular topic is invited to contribute to that documentation — they will be offered access to the technical data.

There will be new components to RISC OS 4+ and the OS now takes up 4.3Mb of 6Mb ROMS (compared with 4Mb for the previous OS). RISCOS Ltd are now recommending that we use machines with at least 16Mb RAM.

There isn't enough room here to describe all the changes — simply demonstrating them took five hours! — and the development hasn't stopped; RISCOS Ltd were still taking on board ideas offered this week and agreeing to include features that I have been requesting ever since Risc PCs were first sold.

The RISC OS 4+ operating system is being sold over a period of time and early users of the OS will be able to help remove outstanding problems and influence the product that is produced. There will be no justification for later complaint if you don't take advantage of that offer now.

RISCOS Ltd will be providing an improved version of the ANT Suite as already announced. Its inclusion will allow new users to access the Internet immediately and leave open their option to replace any or all of the ANT modules as they learn how to use the Internet, assess their needs and appreciate the pros and cons of alternative software available.

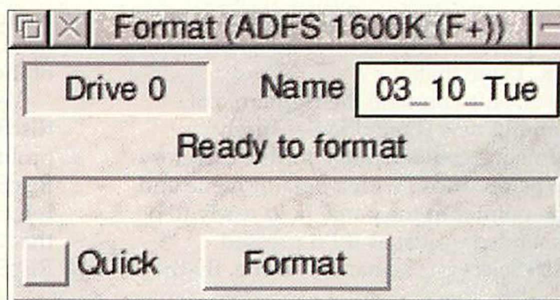
It is expected that this will be enabled by moving the ANT Configuration panel to a standard RISC OS configuration through Boot. This open access philosophy is followed throughout the changes to RISC OS 4 as links are made available for improvements to the OS by PD and commercial authors.

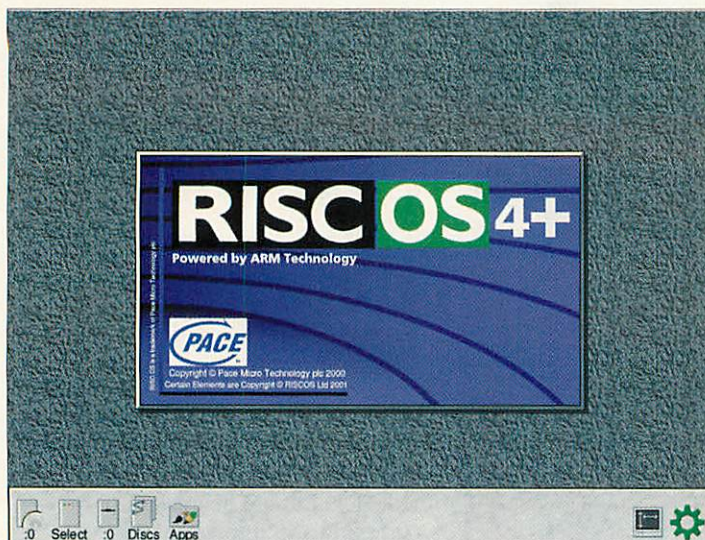
Count, *Free*, *Find* and similar Filer items will include a simple link for authors to add improvements so the user effectively enhances the Filer rather than having to load (yet another) application, for example a graphical display of directory contents. RISCOS Ltd are being careful to upgrade and improve while generating additional space for 3rd party authors; and the best such offerings may, with agreement, be included in later Select CDs.

As the deal with ANT was only recently completed the work in this area is behind other work but RISC OS Ltd are clear that they want a more standardised Boot sequence so that the ANT Suite uses the normal RISC OS Internet stack and not mess around with it's own modules/stack and so on. This is good news for users experimenting with alternative Internet applications.

CDFS has been improved although the commercial CDROMFS still remains a better alternative. There is a new CD player which will automatically pop-up in response to clicking on a music CD icon. The player will read mixed mode and video CDs and will use *AcornCD* for access to CD labelling.

There are more extensive PD versions available but the built-in application is much more versatile than before and limitations are removed. The CDSoftAtapi module will now read DVD drives. Those with a network of machines will appreciate that the Access+ functions are now built into the system so CDs





can be shared across the network passworded, as can selected contents of harddrives, floppy discs and RAM.

Out with the niggles

The philosophy has been to make the system smoother, iron out the niggles and enhance the enjoyment of using the system — for both general users and software writers.

"Are you sure you want to shut the computer down?" — You do, but only to restart it? Now there's an option to do it directly.

"Ready to format" — all you actually want to do is to clear the floppy's content and formatting will take too long. So choose the Quick option to simply delete the disk's directory.

"Why doesn't RISC OS have a global clipboard like Windows?" It does, and has for some time, but not all software writers used it. Why should they when the standard applications ignored the option? Now there's another slick way of transferring items between *Draw*, *Paint*, *ChangeFSI*, *Edit*, *SciCalc*, ... and there's no excuse for anyone not knowing about the global clipboard.

"Can't we have a more interesting pinboard?" Perhaps shading from any colour to any other colour — OK.

"And options for writers to pull the pinboard to the front, take action when the pointer is held at the sides, tint icons?" OK. Done that.

"Don't you hate the rigmarole of naming new directories — surely someone could arrange for the directory to be produced with a default name and the pointer in the name field ready to be amended — just as if I'd pressed Alt+Select on the name?" Done. By the way — have you noted that it takes far longer to describe that than do the action itself. Slick.

Then again Alt+Select is a bit long-winded for renaming files (introduced in RISC OS 4.02) and clicking on the name of a selected file would be far smoother. Done.

"And selecting a group of files is a bit hit and miss." Perhaps you'd like files to show immediately they are selected?

"As is dragging files" Would labelling the file that's being dragged help? And groups of files labelled with the number of files.

"And I hate numbered files that go 1, 10, 11, 12, 13, 2, 3, 4, 5, etc" That's OK. Just get Select and your pet peeve will disappear.

Once an operating system has the big things right (and RISC OS got many big things right very early on) it's the *little* things that cause the niggles, or not, and RISC OS 4+ puts lots of niggles behind us. By listening, leaving the system open for enhancement by third-parties, simplifying and keeping to the style guide RISC OS Ltd have produced an Operating System that will be a pleasure to use.

Some will complain that it's no more than what should have been there before and others that it's too expensive. It includes features I would have liked with v3.5 and a philosophy that would have undoubtedly made Acorn more successful. The new features weren't included earlier and what we have from Acorn is a legacy of an excellent OS design with potential. RISCOS Ltd are now realising that potential.

Hardware options

Select works with ViewFinder and the changes required to work with Kinetic are being tested at present. Two months ago we mentioned that some manufacturers need to discuss the special requirements of their hardware with RISCOS Ltd.

We've been able to confirm from RiscStation that there is no known problem between RISC OS 4+ and the RiscStation machines but that the problem referred to earlier was with new ROMs that are still being developed for future RiscStations. As both RISC OS 4+ and the

In brief

The Director's chair

Director is a general purpose desktop tool. It allows you to customise your desktop by creating menus of useful commands and icons to attach to menus. Any number of menus or icons can be created and attached in any order to each other. The program also allows an alternative and faster view onto files in the form of directory menus and allows these menus to be attached to other menus also.

Director has some other useful features such as remembering the most recently used files, adding key strokes into the keyboard buffer and producing directory menus over drive icons.

It's also fully customisable by the user, and can do many or all of the functions of Pinboard+, TreeMenu (AKA DirMenu), Filer-, QuickDir, DeskUtils, Memorizer, Menon and some of the functions of Filer+.

A beta release (v0.27) is now available and those who downloaded the pre-beta release should upgrade to this release.

Since the last stable release of Director, the following changes have been made: MemoriserClear, Sticky Notes and Desktop Bin utilities added; FindDrives has been extended; Bug fixes and enhancements to the CDFS support; and Memorizer saves and loads it's memory when Director is quit and restarted.

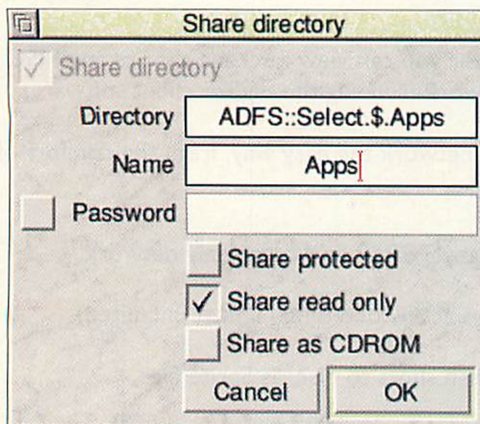
www.sourceforge.net/ projects/director/

Sigh for Psion

Although there has been much recent speculation about Psion recently a senior Psion spokesman Peter Bancroft confirmed that "There will be more Psion consumer products in the future."

Despite dropping some of its products Psion is to keep its

Continued...



future RiscStation ROM design are under constant revision it's simply a matter of the two development teams keeping one another informed — as we pointed out before.

If you're worried about adding a new Operating System and getting stuck, particularly if you run the beta modules, then a new boot option should remove your concern; booting with shift held down will produce a set of boot options including booting from harddrive, floppy, CD, network, and so on, or return to the original RISC OS 4.02/3 ROMS and shared boots will be shown.

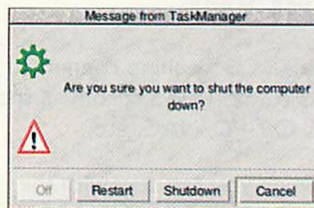
As I've mentioned above there is far too much in RISC OS 4+ to describe in one month but we thought it important to indicate a feel for the product now that we've seen it in action. Next month we hope to be able to start reviewing RISC OS 4+ (rather than a preview) and perhaps then we'll include more of the features that we've seen demonstrated as well as those we hope to get extended access to for ourselves.

The Select scheme can be purchased for 1 year (3 CDs are planned for the first year) for £105 (£99 to Foundation members) but the Select CDs will only work on machines already running RISC OS 4. If you don't have RISC OS 4 but do have a machine that can take a RISC OS 4 upgrade then the upgrade and a year's subscription to Select will cost £179. The upgrade to RISC OS 4.02 alone costs £109. If you upgrade to RISC OS 4.02 and then order Select within four months the Select subscription will only cost £80.

The Scheme is particularly advantageous for users with more than one RISC OS 4 machine at home as only one subscription needs to be purchased — but users with more than 10 machines under the same roof should ask RISCOS Ltd about the price they need to pay.

RISC OS 4 users with non-standard machines such as the RiscStations would be best advised to check with RISCOS Ltd or their computer suppliers to ensure that Select has been tested on their supplier and won't cause problems with a machine-specific Boot file. Other than that it looks as if RISC OS 4+ could be exactly what we wanted.

Roll on *Select CD1*.



My RISCOS

I've seen the future. Actually it has been a busy week looking at the future — and all just before we went to press. One bit of the future is the essential bit for all of us using RISC OS and that's the route that's being taken by RISCOS Ltd with the Select scheme that I've described. The other bit of the future intends to plug a hole that Acorn and its successors have (so far) notoriously left gaping.

Of course I'm talking about PR. In many ways the current crop of RISC OS Web sites have taken on the role of public PR electronically but now a new RISC OS portal has opened with the potential to serve the RISC OS community and present RISC OS to the general public.

My RISCOS — at **www.myriscos.co.uk** is hosted and administered by Jeremy Coates of CoComp; the man who took Acorn's departure from the scene as the signal to set up in business in the RISC OS arena. Now there's the requisite, positive attitude.

The My RISCOS site will be administered by CoComp alongside commercial portals and will benefit from cross-fertilisation of ideas with the other sites. At its core My RISCOS is a Web site with information about RISC OS but it is aimed at enabling the site's users to submit news articles, tutorials, have discussions, co-ordinate downloads and collect links and so on.

My RISCOS has many exciting features but what sets the portal apart from some of the others aimed at RISC OS users, is the ability for visitors to submit news and articles themselves in a similar style to Slashdot (**www.slashdot.org**).

It is hoped that the special features of My RISCOS will make it a natural home for anyone seeking information about RISC OS as well as being a repository or link to everything concerning RISC OS.

Visit the site: **www.myriscos.co.uk**

In brief

Notebook which, in the past, was subject to speculation about being used to bring a RISC OS to the small portable market. In earlier days hand-held Psions were re-badged as Acorn machines with amended (but not RISC OS) software and a Psion derived hand-held machine is presently offered by RiscStation re-badged and bundled with software for RISC OS connectivity.

RiscStation Mice

CTA have just announced that they are selling Optical Wheel mice for all PS2 machines. The same mice are now included as standard on the RiscStation+ and Scorcher machines. Schools (or possibly anyone else) who purchase 10 or more basic RiscStations will also be supplied with the new mice.

CTA Direct 01942 797777
RiscStation 01942 797766

RISC OS names

RISCOS Ltd has taken over all RISC OS allocations from Pineapple Software, who will now be concentrating their efforts on the Virus Protection Scheme and their PAL TV coders.

Although it's only directly relevant to software writers it effects us all if two or more applications share the same name or filetype and so on, and some authors don't seem to have got the message. So if you find such clashes as a user then why not advise the author to contact RISC OS Ltd? The new address for submissions is **allocate@riscos.com**

Contacting AU

news@acornuser.com
John Cartmell

OCR Software for RISC OS

SLEUTH3

The market leading Optical Character Recognition software. Supplied on CD with Sleuth 2. It converts scanned images of text into an ASCII or RTF file with an accuracy of over 97%. Sleuth 2 is not as sophisticated but on clear images may be faster.

Sleuth 2 £29 **Sleuth 3 £49**

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Easy to use RISC OS database

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The best selling easy to use RISC OS database is back. This new release is supplied on CD with lots of examples and ready to use databases. You could pay much more for a database, but do you really need to? **£14.90**

DrawWorks Third Millennium

Main new features in DW 3rd Millennium
Works on all versions of RISC OS from 3.1 onwards including currently proposed future versions. Faster than any previous Millennium version of DrawWorks. Over 50% less processor load than any previous version. Double click an EPS file and it loads into Draw. Autoscroll or manual scroll toolbars. Autoscroll toolbars now move much faster. All features now work with !DrawDA. New microbar with commonly used features. Line width, colour, rotate and scale options always available. Font and pt size menus always available.

New Tools
Export as SVG. Export as PDF (using GhostScript). Writable options for start cap and end cap menus. Nudge buttons for start and end cap triangle options. Freehand drawing mode. DWDistort tool to distort objects visually by dragging. Extract the text from text objects automatically. Export all text objects from a drawfile in one text file. Text Area control tool including font and point size. Change the number of columns in a text area easily and quickly. Set margins, line spacing and paragraph spacing for text areas.

Improvements to existing features
Export GIF with NetSafe colour palette. New moulds for the path moulder. Improved EPS output. Shadow tool auto groups all soft shadow layers. Start cap and end cap menus tick to show current selection. JPEG export tool improved. Re-designed preferences window.

At last!
Available as a full stand alone product, not just as an upgrade, and now with printed manual.



DrawWorks is the leading RISC OS vector graphics program integrating with !Draw to provide a professional design package. A full list of features would probably fill several pages, but as well as DrawWorks itself this new CD includes ***Typography 2500*** with over 350 high quality fonts, ***FontFiend*** font editor, ***MrClippy*** with over 800 pieces of clip art, and much more. Find out more on the APDL web site at

www.apdl.co.uk/isv/dworks.htm

DrawWorks 3rd Millenium now comes with a 60+ page printed manual. This is available separately for existing users for just £7.50 inclusive (UK) plus £1.50 carriage outside UK.

£39 *Add £2 carriage outside UK*

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6.3 Gb		£69	£118
8.2 Gb		£72	£121
9.1 Gb	7200	£73	£122
10 Gb		£74	£123
15 Gb	7200	£79	£128
20 Gb	5400	£85	£134
20 Gb	7200	£99	£148
30 Gb	5400	£94	£143
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44 Gb	7200	£129	£178
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The XT PC emulator that works on any machine with 2Mb

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Great database. Does everything most people will ever need at a sensible price

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Superior pull-down menu system with lots of features

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Switch between 30 desktops with a single mouse click

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FP Mb	FP	£25
32 Mb	EDO	£37
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64 Mb	from	£47
128 Mb	from	£84
1 to 2Mb VRAM exch.		£49

APDL Public Domain and other CDs

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APDL PD-2	£7.90	Over 700 games, novelties, cheats, demos, sound, music, etc.
DTP-1, DTP-2	£6.90	Each has over 500 Mb of clip art, ready to use in Acorn format
DTP-3	£9.90	Highly acclaimed clip art CD with more than 720 Mb.
DTP-4	£12.50	Latest clip art CD with around 13,000 files. Great for schools!
Publish Art '98	£7.90	Thousands of pieces of clip art and web images, by Smart DTP
Fantasy Pictures	£6.90	By request, from the Fanatsy section of the APDL catalogue
The Grafix CD	£6.90	1000's of pictures, backgrounds, buttons, and much more
Best Games 1	£6.90	20 of the best PD games ready to play direct from the CD
Best Games 2	£6.90	Games 1 was so popular we've done it again. 20 more games.
Best Games 3	£6.90	Yet another great compilation with 25 of the best games.
Skullsoft *collection*	£7.90	Great budget price games CD with *!Arya*, *!Xenocide* and *!Plig*
Soft Rock *collection*	£7.90	Six classic games by Soft Rock, plus a new version of *!Trellis*
Ergane	£6.90	Translating dictionary for over 50 languagesby David O'Shea.
Earth Data	£7.90	Geographical database with lots of statistics, plus *!Earthmap*
Wizard Apprentice	£6.90	Highly acclaimed multi-level game. Risc PC only.
Education Resources	£9.90	A CD especially for schools. More than 300 useful programs, over 5,000 specially selected clip art files, hundreds of classic novels, multi-media, educational games and lots more.

APDL ideA fast IDE interface

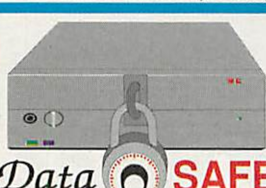
- No complicated setting up. It's self-configuring so just plug it in!
- Uses DMA on Risc PC. Over twice as fast as the built in IDE interface.
- Includes CDFS and ATAPI CD drivers for many popular CD ROMs.
- Four devices, any combination of CDs and hard drives.
- Up to 8 partitions, so you can have large drives on pre RO 3.6 machines
- Software in flash EEPROM for easy update.
- Connectors are available for external drives or CD ROMs
- Fits A310, A400, A5000, A540, A7000 and any RiscPC.
- You can now use CDR or CDR/W drives with !CDBurn. No need for expensive SCSI interfaces and CD drives!

All these features for the incredible price of just £52
A version for A3000, A4000, A3010 or A3020 is available for £55

Ancestor+

The program for family historians and genealogists. Very easy to use. Imports !Ancestry 1 and II, !Family, CSV and GEDCOM and exports as GEDCOM or CSV. Can save as cross referenced HTML, with pictures, so you can pass data on to people who have a computer but no genealogy software, or upload to your web site. Powerful and flexible reporting and searching. Unlimited information storage, you aren't restricted to a few lines of text and a picture. *Ancestor+* is based on the program that Graham Crow was working on at the time of his death, which was a development of his original *Ancestry*. Price just **£49**

Data Safe - A new concept in backup and data security



DataSafe consists of an external case to hold a 3.5" IDE drive, connected to your machine's printer port. This gives a large capacity portable drive, movable between machines and locations. Ideal for backup, secure data storage and transport. All the features of our ideA card, partitioning, passwords, etc. Great for schools. Supply your own drive or we'll fit one for you. Prices start at £99 or with 20 Gb drive £184 or 30 Gb £193

DataSafe is highly praised, but there's been one criticism. People would like it smaller and lighter so carrying between home and office (or school) is even easier. So we've introduced the DataSafe 'mini'. With all the features of the standard version, this uses a 2.5" drive so it's very small, about 5" by 5" and less than 2" high, and weighing only about 14 ounces! Prices start at £99 without a drive or with a 1.8 Gb drive just £159

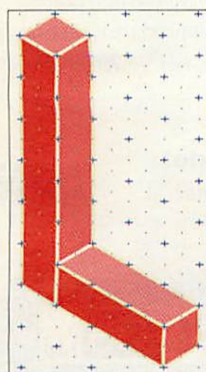
Demure sheet slipping

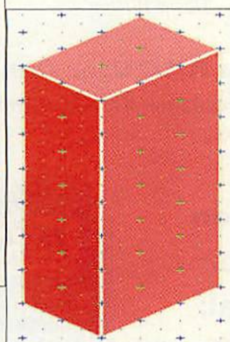
A nightmare for publishers is the deliberate error that must remain unaltered in a magazine. Someone seems to have worked very hard to correct a picture error in the *Vantage* review in the July issue of *Acorn User*.

The trouble is that the picture in question was intended to illustrate a problem that arises when *Vantage* isn't used and, as printed in some copies, it's difficult to detect the difference between the actual and the intended result. Anyone confused about Andrew Green's description of the Logo in Figure II of the review (*Acorn User*, July 2001 p20) should look at the illustration at **http://guineapig.article7.co.uk/vantage/** Rather than tempt fate we'll not try to reprint the error.

Last month I left you with a set of problems about tesselations. Put simply I asked you to explore the possibilities of producing tesselations based on regular polygons other than squares. There are only two options other than squares — using triangles and hexagons and both demand the use of a triangular grid. It's the grid itself that forms the diversion this month.

There are two grids available with Draw — rectangular and isometric. *Artworks* only had one (rectangular)





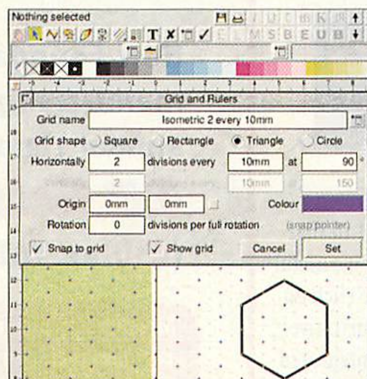
until Martin Würthner's Grids module added isometric and circular. *Vantage* allows the production of square, triangle and circle grids. In addition the grid options window is well organised and allows you to name a given set of choices so that you can choose a particular grid-style. These styles are saved with a file but what I haven't yet discovered is how to save your grid-styles as the default settings.

Cerilica call their grids triangular rather than isometric and the default setting is different from that provided by the other two applications. In short *Vantage* displays an isometric grid on its side! Happily the *Vantage* option window allows any grid to be turned through any angle and the manual does correctly suggest (p189) that an isometric grid can be created by turning its triangular grid through 90°.

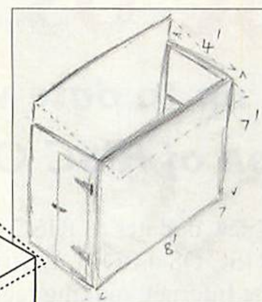
Surprisingly it also states that isometric itself is arbitrary in terms of angle. If you're taking any GCSE course that requires the use of isometric drawing then ignore Cerilica's aside — isometric grids have vertical lines and all horizontal lines are drawn at 30° to the horizontal — exactly like the *Draw* and *ArtWorks* isometric grids and the Vantage triangular grid at 90°.

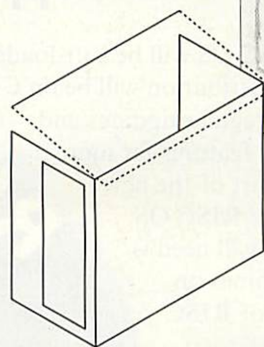
As a teacher I've seen pupils struggle to produce isometric sketches because they've turned a grid the wrong way; perhaps Cerilica could provide an isometric option that automatically turns 'triangular' through 90° and calls it isometric? What is an isometric grid anyway — and why bother to use one?

Put simply it's an aid to producing a three-dimensional sketch of an object where all three dimensions can be drawn to scale. It's not the same as perspective, despite a comment to that effect by Martin Würthner when he released his Grids module.



"I want a shed like this" — a rough isometric sketch to show an idea. While below, the shed sketched using Draw — to scale and produced as quickly as by hand





While perspective drawings (all horizontal lines meet) are well suited to pictures of the environment isometric drawings are best suited in representing single objects and *Draw* (*Vector*, *DrawWorks*, *Artworks* and *Vantage*) are excellent tools for this task.

Being able to produce isometric sketches (by hand) is something I've always insisted upon in my technology classes and the skill of producing such sketches forms a basic means of communicating ideas in the subject.

For beginners I would print out an isometric grid (I'm sure you can guess which program I would use) and the grid could be placed under a blank sheet of paper and used as a guide. Experienced users don't need this aid. Producing isometric drawings on the computer is simply another means of presenting this form of graphicacy.

I'll leave you with some examples of isometric drawings but the rest of this diversion will have to be concluded another month. In the meantime you can practice using the isometric grid or even print out a grid and test your graphicacy by hand.

Tesselations? Don't worry, we'll get back to them soon.

• There is an unofficial prize-less competition for the first person to crack the cryptic headline.

Contacting AU

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John Cartmell

Pinboard camera

Stuart Halliday's summer was not quite what he'd expected. He'd worked hard on a new design for his *Acorn Cybervillage* Web site that was simpler, less graphically oriented and more friendly to "any browser".

The new site went online of the 8th of June 2001. Six days later on the 14th June, the Web company that hosted the *Cybervillage* site and several other well-known RISC OS sites suddenly announced its voluntary liquidation.

The *Acorn Cybervillage* disappeared for a month while Stuart negotiated new hosting. Happily it has returned to the RISC OS scene with a new Web hosting company, Gradwell.com and a new URL to match its new look
http://acorn.cybervillage.co.uk/

All this upheaval hasn't stopped Stuart from working on other projects, such as his *CamPins* scripts package. These are a set of text scripts that fetch images from the Internet and place them on the RISC OS pinboard as desktop backdrop images. Stuart has chosen image sources for his example scripts that range from daily strip cartoons to webcam images from around the world.

The *CamPins* scripts run in a *TaskObey* wimpslot, which allows the single-tasking program to run in a multi-tasking way.

This means your desktop can continue functioning normally while the script is executing invisibly. Important included resources actually do the fetching and processing, leaving you and your browser to go wherever you want.

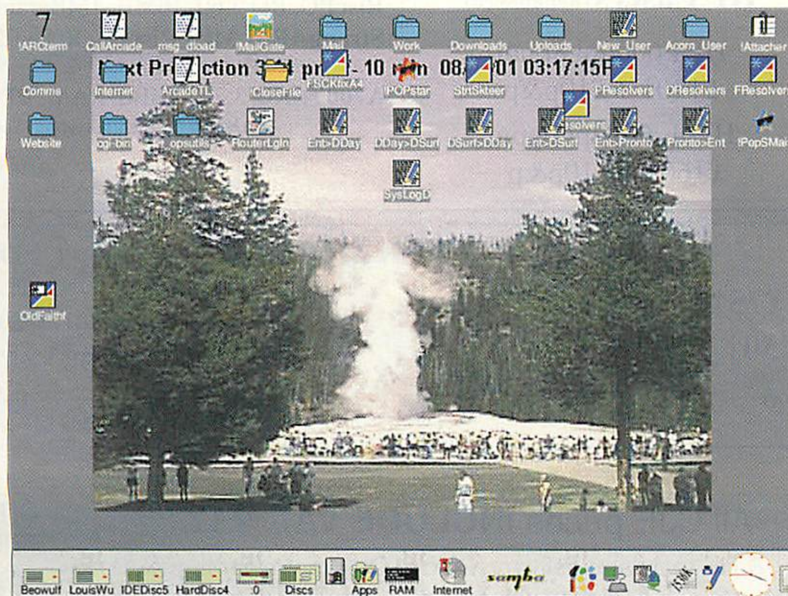
The main application called *cURL*, ported to RISC OS by Michael Curtis, is an Internet document and file fetcher. The *CamPins* script fetches the required image file using *cURL* and stores it temporarily on hard disc.

When the image has arrived, *CamPins* calls that most under-appreciated marvel of Acorn programming *ChangeFSI*, included in the package, with the fetched image file as its argument. *ChangeFSI* detects the format of the image, converts it to a RISC OS sprite, resizes it and sharpens it. Finally the image is displayed on the desktop backdrop.

The *CamPins* scripts can be edited and modified with care for different picture URLs and image sizes. Using *!Alarm*, you could set up a regular change of backdrop just by dragging a *CamPins* script to the Alarm setting window and setting the Task alarm box. Remember that this may make your modem dial out automatically if you are not yet 'always on'.

Now here's an idea for you, Stuart. Upload a daily image of the RISC OS hot headlines to the new Web site, point a *CamPins* script to it, and you could have the *Acorn Cybervillage* on every RISC OS desktop.

CamPins by Stuart Halliday
www.quantumsoft.co.uk/files/internet/cam_pins103.zip



Some old geyser throwing up all over my desktop

In brief

Free Ansaphones

One for every reader? If you are also BT subscriber, then yes. BT's Answer 1571 is a free cut-down version of £6 per quarter CallMinder, giving up to 10 messages of 2 minutes each.

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BT Answer 1571
www.bt.com/answer.jsp

Bon Surf

My *Acorn User* test account with free ISP FreeUK was put to good use during my holiday in south-western France. FreeUK's partner FreeSurf allows its users in France to dial their local rate access number and login with a FreeUK username and password.

This usually worked and allowed me to read all my Demon, Enterprise and FreeUK e-mail using WebMail services. For posting e-mail, I needed to specify the **FreeSurf.fr** SMTP server.

FreeSurf
www.freesurf.fr

Spelling test

When the ISP hosting my personal domain name went bust earlier this year, all e-mail was suddenly cut off. My agent, the redoubtable Spellings Computer Services were quick to grasp the situation, and e-mail flow was restored after three days.

Their new Web site offers improved customer support and services, such as domain registration, Web hosting, Web design and PC Maintenance. There's also a cgi FAQ and service centre for amending e-mail forwarding and aliases.

SCS also hosts the RISC OS 2001 Show Web site at **www.riscos2001.com**

Spellings Computer Services
www.spellings.net

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Reality check

Paul Middleton, Managing Director of RISCOS Ltd, reports on the current state of play in the RISC OS market

I am sorry if some people have interpreted my various speeches over the past year as not appearing to being very upbeat, but the fact is that the RISC OS world is completely different to what is was five years ago and there are different things to get excited about.

Acorn used to produce hardware and software. Nowadays we have three different manufacturers producing hardware for desktop computers and Pace producing hardware for the STB market. RISCOS Ltd looks after the software for the desktop and Pace does the honours for the STB world. In fact Pace's use of RISC OS is focussed on what is called the IPTV market. Take a look at Pace's web site **www.pace.co.uk/products/index.asp?id=23** for more details of their RISC OS-based IPTV box.

The reality is that RISCOS Ltd has to be commercial, and it can't undertake everything that some of the users expect without a guaranteed return. While the initial funding for RISCOS Ltd came from companies and enthusiasts, they expect us to try and make money from what we do. RISCOS Ltd is not a charity.

There is a body of opinion that seems to think that software should be cheap or free, but the fact is that even with software that appears to be free, someone has to be making money in order for it to be paid for in the first place. Linus Torvalds (the creator of *Linux*) works for someone else for a living. He doesn't make money out of giving Linux away. Some people think that RISC OS should be competing with Linux, and that RISC OS should be really cheap to encourage people to use it. But there is no such thing as a free lunch.

RISCOS Ltd does not have a business model of selling large volumes of RISC OS cheaply as we have to make money in order to continue to develop RISC OS. Much discussion has gone on about RISC OS 4 upgrades being too expensive and that Windows is so much cheaper. But that is a fallacy. Windows 2000 costs £160 to £250, an OEM copy of Windows 98 costs £65, and commercial packages of Linux can cost £50 to £70.

Linux is really a totally different animal to RISC OS and while enthusiasts may be happy fiddling around learning a new Linux command every day, there is a vast sector of the market that just wants easy to use computers that don't continually get filled up with software that they don't use and can't work out how to get rid of.

Schools may be able to purchase Windows licences for £25 a time, but there is virtually no cost to Microsoft in those copies except for the cost of producing a Serial Number Sticker — they probably make £24.99 profit.

In comparison, RISC OS 4 upgrades have a cost of at least £25 to produce the ROMs, CD, manual and so on, so a that price the profit would be nil. We sell upgrades direct to end-users, but over 50% of sales are via dealers and over 75% of people pay by Credit Card. Allowing for tax, royalties and other overheads involved in producing a RISC OS 4 upgrade we can make less than £20 profit when selling RISC OS 4 for £99. If we sold RISC OS 4 upgrades for only £50 we could actually make less than £4 profit. This would mean that if we wanted to spend £200,000 developing RISC OS 4 that we would need to sell 50,000 copies just to cover the costs.

To put this into perspective, Apple sold 180,000 copies of Mac OS X in the first week of its release worldwide. That gave them an income of nearly $20 million and yet Apple have only a 6% share of the market in the UK. They expect to sell 4,000 iBooks per week worldwide, whereas we have 4,000 users in two years. The fact is that the RISC OS desktop market is an enthusiasts market, but there are much bigger markets in which RISC OS can and is used.

What many people still think is that Acorn only used to sell Risc PC's and A7000's and that they had 200 engineers doing development work. In fact they sold more Network Computers and Set-Top Boxes than desktop machines and worked on many different versions of RISC OS. The profit from the hardware (which could be as much as 300%) paid for most of the OS development and only about 30% of their 200 staff were actually software engineers.

In comparison RISCOS Ltd has just 3 software engineers.

When we licensed RISC OS from Element 14 we got the version that was intended for use with the Phoebe Risc PC 2 hardware, and most of the work we did was to make it work with A7000 and Risc PCs. RISC OS has always been very hardware dependent with new versions being developed to support new hardware.

Nowadays the commercial reality is that when a customer wants a new version of RISC OS, they usually want it quickly and as a consequence this usually means that changes are done on a quick fix basis, rather than in an ideal fashion. This doesn't stop different components being used — products such as the Viewfinder card work well, but have certain limitations because they have to hack into the OS rather than the OS being

changed to suit the requirements of the hardware.

RISC OS 4 represents the culmination of something in the order of 100 man-years of work. To convert it to a 32-bit version is at least a few more man-years. It has come out that Pace have a 32-bit version of RISC OS, on which they can play games like *Spheres of Chaos*. Unfortunately being able to play games doesn't mean being able to run *Artworks*, format floppy discs, access a hard drive or a whole raft of other features that a RISC OS 4 desktop user would expect. Most customers of Pace don't experience RISC OS in the same way that desktop users do.

For the future success of RISC OS, it is important that we capitalise on the good features that it has rather than trying to compete directly with its rivals. These features include low cost hardware. ROM based = fast startup. Limited hardware choices mean it is reliable as there are few chances for driver conflicts as happens with Windows and Mac OS.

It might be nice to think that RISC OS could run on Intel Pentium processors, with their apparent cheapness, but why? A typical 1.4 GHz Pentium can need a 450W or even 600W power supply.

In some areas of the world such as Silicon Valley this puts such a load on the local electricity supply that power cuts and brown outs are common occurences. If they were running Risc PC's that load could be cut to at least 30% of the current usage.

Furthermore even if something that looked like RISC OS was available to run on a PC what software would it run? Anything written in C could be re-compiled with a lot of work to run on a non-ARM processor, but anything written in Assembler would be virtually impossible to convert.

The strengths of RISC OS are that it runs on low power RISC-based ARM processors, so there is no point trying to compete with super-charged power hungry Pentiums. The same is actually true of converting RISC OS to run on 32-bit processors.

Even if RISC OS was made available in a 32-bit version now, you would not be able to run any of your current software until new versions were compiled for use with a 32 bit OS. If you have a 26-bit capable 32-bit processor (such as the SA110) then the operating system can give you the option of running 26-bit or 32-bit software.

However if you have a 32-bit only processor (such as the XScale) then the operating system must itself be 32-bit and your software must also be 32-bit. If you have 32-bit only processor you can't run RISC OS applications on it unless you have a 32-bit based operating system and your software is written to run in 32-bit mode.

So what are the plans?

As I have stated publicly, we are not currently developing a 32-bit version of RISC OS quite simply because none of our customers has made a commitment to purchase it — in this case customers mean the Hardware Developers.

We know that end users want faster machines, which in practise means moving to 32-bit processors, but we cannot afford to develop a version of RISC OS which is able to support any permutation of hardware and work with any of the different ARM9 or XScale processors if only one of the many permutations is actually ever used in a real product.

Thus it is down to the hardware manufacturers to make a commitment to produce a machine that uses a 32-bit processor and then coming to an agreement with us to justify the production of the version of RISC OS to go with their hardware.

While supplies of 26-bit capable processors remain available we will continue to develop 26-bit versions of RISC OS. This gives everyone the chance to carry on using their existing software. Remember if a new 32-bit only based machine became available tomorrow, you would not be able to run any RISC OS software on it until there was a 32-bit version of RISC OS.

You cannot run RISC OS applications on a computer without either a RISC OS Operating System or a RISC OS emulator on it. You would not be able to take your current version of Artworks (for example) and run it on the new computer until you have both a 32-bit RISC OS and a 32 bit version of Artworks.

The desktop market is still essential for the future success of RISC OS, as without desktop machines, how are the future RISC OS programmers going to learn how to develop for RISC OS?

There are, I believe, two sectors where RISC OS has a lot to offer:

• In the high volume markets, such as for schools and embedded products where low component cost and reliability are essential.

• In the enthusiast martket where a high specification desktop product will be appreciated. Don't forget that those of you who paid £2,000 for a Risc PC in 1994 are probably still using that same machine albeit with a few upgrades along the way. In comparison I suspect most PC users have bitten the bullet and upgraded to completely new machines at least once, if not twice during that same period.

For the future therefore I hope that you will see that trying to produce a cheap high performance RISC OS computer is self defeating. Innovation costs money, which must come from making profits. With the realistic size of the desktop market sufficient profits do not come from selling cheap products.

If you want longevity and reliability buy a new RISC OS computer. If you want something that is only going to last a few years, buy a PC or a Mac, or better still buy a PC or a Mac AND a RISC OS machine, after all they all have their strengths and weaknesses, and it is foolish trying to make one single product that is everything to everybody as that ultimately means compromises. END

Moving the

Nic Blinston reveals what's behind digital video for RISC OS and more

Like many things in the modern world, digital video isn't quite as new as you might think. Way back in the late '70s — around the time the CD was being developed — a project was instigated to create a digital video recorder.

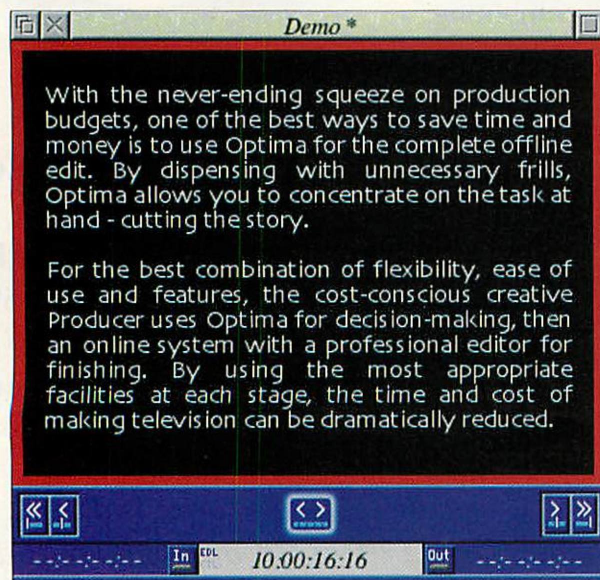
That project came to fruition in 1987, when Sony launched the world's first commercial digital video format, called D1. This pinnacle of technology was attained only 60 years after the very first television recordings — Baird's 30-line mechanical disc system — and just 30 years after the first commercial video recorder, made by Ampex in the US. I attended an early demonstration of the new D1 machine, which came in two pieces for ease of handling.

The tape transport mechanism and the electronics unit were so cumbersome that it would be nearly impossible to move a one-piece machine. Someone half-jokingly asked how long we'd have to wait for a portable version. The experts said that they didn't foresee a digital recorder ever being made portable — not least because no-one would be able to carry the batteries it would need.

Despite being the first development, the D1 format was the ultimate in technical quality for recording and editing, and offered a seemingly limitless ability to copy and re-copy material with no degradation. For this reason, it was enthusiastically taken up by producers of big-budget commercials and pop videos who wanted multi-layered effects.

However, it proved to be just too expensive for most other uses — both in the initial capital cost of the machines, and crucially, the running costs. The massive cassettes were over 14in wide, and as well as costing a lot to buy, cost a lot to store — especially in the TV industry's high-rent Soho facilities.

Although superseded for television use, the format is now sold as a data storage system — the cassettes hold nearly 100Gb of data, and the latest machines only weigh 70kg...



The D1 format introduced an important concept into the video world — sampling. Just as with a CD, where the analogue waveform is sampled at regular intervals (44100 times a second, or 44.1kHz), so the incoming analogue video signal is sampled — and a high quality video recorder doesn't just have one signal to sample. To maintain resolution, such recorders use what is known as 'component' recording, where the picture is stored as three separate signals.

First is the luminance (black and white, or the 'brightness' element) which contains most of the detail of the image. The colour information is less significant and is contained in two separate signals, known as 'colour difference'.

International agreement had settled on a fundamental frequency of 3.375Mhz, and to keep up the quality, sampling must be a multiple of this. The luminance is sampled at four times the fundamental frequency — 13.5Mhz, over 300 times the rate of CD audio. Each of the colour difference signals is sampled at half the rate of the luminance, making it twice the base frequency. The ratio of luminance and colour difference signals is therefore known as 4:2:2 and this is acknowledged as giving the best quality recordings.

For many years however, the broadcast industry had been making 'composite' recordings — where the picture is stored as just one signal, in the same way as a regular VHS machine. It was soon realised that separating composite signals into components degraded the picture quality and negated part of the benefit of going digital. In 1988 the D2 format was introduced by Ampex, which recorded a composite signal without splitting it up. This format is also now the basis of a data recording system.

Eager to capture part of the expanding market for professional digital video recorders, Panasonic developed the D3 format as a replacement for D2. Using smaller cassettes and machines, D3 scored a major success when the BBC decided to standardise on the format to

digital image

replace its old analogue composite machines.

To cover all the bases, Panasonic also introduced the D5 format, essentially a component version of D3. Just for the record, there was never a D4 format — 4 is unlucky in Japan so they skipped it, like modern housing development skips number 13.

All the formats so far introduced suffered from one fundamental problem — sampling at such high frequencies (especially the component machines with their three signals) meant they had to deal with an enormous data rate. In order to achieve real affordability for digital video, the amount of data would have to be cut — this is known as compression.

The size of the compressed version is compared to the original as a compression ratio, expressed as n:1. Bit rate reduction theory had existed for many years, but until the early 1990s the hardware to achieve the kind of processing required was prohibitively expensive, even in broadcast.

Although there are numerous techniques for compressing video, there are two fundamentally different types of compression. Many recording systems use both in combination. The first is known as intra-frame compression, where each frame of the image — 25 a second in the UK, 30 in the US and Japan — is dealt with individually.

The object is to reduce the amount of data needed to describe the frame, much as the JPEG compression scheme is applied to single still images. One way to achieve this is to find shorter words to describe the same thing — like using the word 'bus' instead of 'omnibus'.

Or the way that Americans shorten 'automobile' to auto — and we say 'car'! Compressing automobile to car reduces ten letters to three, a 3.33:1 ratio. To describe a whole street scene, we can remove certain words from the description altogether without entirely losing the meaning:

There is a road, which has two lanes. Alongside the road are streetlights, these are all switched on as it is quite dark. The road has a pavement, which, like the road, is wet. There are trees along the edge of the pavement, and because it is Autumn the leaves are brown. Parked under one of the streetlights is a red car.

Which becomes:

Road, two lanes. Streetlights, on. Pavement. Wet. Trees, brown leaves. Red car parked.

This illustrates compression of the amount of information needed to describe a static scene and is known as 'spatial compression'.

Since video is a time-based medium, where things move and change from one picture to the next, it is also possible to employ inter-frame compression to take advantage of the similarities from one frame to the next. Continuing with the example, instead of describing the street scene completely for every sample (say, once a minute), you might only describe the changes:

Street scene (full description). No change. No change. Man walks into scene. Gets into red car. No change. Car drives away, fast. Yellow car arrives, follows red car. Wind blows. Leaves fall. Street scene (full description). No change. Woman crosses road. Woman stands still. No change. Looks at watch. Stands still. Red car returns,



stops. Woman gets in. Car drives off. Street scene (full description).

This illustrates compression of the amount of information needed to describe a changing scene, where some things remain static. This is known as 'temporal compression'. An important point to note is the regular repetition of the full description of the street scene. This is known as a key frame, and means that to achieve a full description at any point only requires the viewer to go back a few steps and then work forward.

Without key frames, if you lost the very first description you would never be able to re-construct the scene. In video terms, you wouldn't be able to edit this material. Well-managed temporal compression is the basis for most types of MPEG compression, such as in DVDs. This is ideal for transmission or other uses where the material is essentially played continuously rather than being edited.



One of the key techniques in compressing the actual data is known as 'run length encoding'. If the street was busy, we could describe the traffic thus:

Car, car, car, car, car, car, van, van, car, car, car, bus, car, car, car...

Or rather more simply:

6 cars, 2 vans, 3 cars, a bus, 3 cars...

If we had started with 'automobile[comma][space]' six times, and ended up with '6 cars' we have achieved a compression ratio of 12:1 for that part — and since we know that 'car' is directly equivalent to 'automobile' this compression can be described as 'lossless'.

To make the decompression work correctly, we also need to know that each occurrence of 'car' must be

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followed by [comma][space] unless it is the last item in the list. This set of information is part of the compression algorithm and must be available to the decompression process. With this knowledge, decompressing '6 cars' reproduces exactly the original with no loss of detail.

By comparison, compression may alternatively be 'lossy' where the method used decides that certain information is insignificant to the overall meaning. For example, if the original description included the model and colour of each car, we could drop that and still have a useful description.

It is important to note that once discarded, the original detail can never be retrieved. This type of compression is used in JPEG images and in Mini-Disc audio, where the compression schemes are based on an understanding of what the human eye and ear treats as significant. Using lossy compression provides extremely good ratios, but is only useful where the basic content is still useful without the full resolution.

This is used to good advantage with JPEG image compression, where receiving a reasonable representation quickly is more important than having the full quality original but having to wait for it. The same applies to the fax machine, which can reproduce a usable copy of a document quickly and with relatively low technology.

It is useful to note that to get the best out of these compression schemes, it is worth preparing the original in a way which fits with the method. By understanding the way that faxes work — by reading runs of dark and light pixels and encoding the most common combinations with short codes (known as variable-length encoding) — you can begin to see why clearly typed text gets transmitted much more quickly than pictures, which have fewer common combinations of dark and light.

The ethos of content importance is at the heart of the compression systems used in *Optima*, the RISC OS based professional video editing system. *Optima* is an offline system which has

1) Rename to something appropriate

Save EDL
ProgEDL.1 OK
EDL Controller and Mode
CMX 340 | A Mode | Offset by 1
Sony 9000 | B Mode | Tape EDL
SMPTE | C Mode
Playback VTRs 1 | Save Options
Source track assignment to EDL Channels
V A1 A2 A3 A4
EDL Checking
Short Hole 00:00:00:05
Short Clip 00:00:00:05
Warn all Holes
EDL Details (scroll to see options)

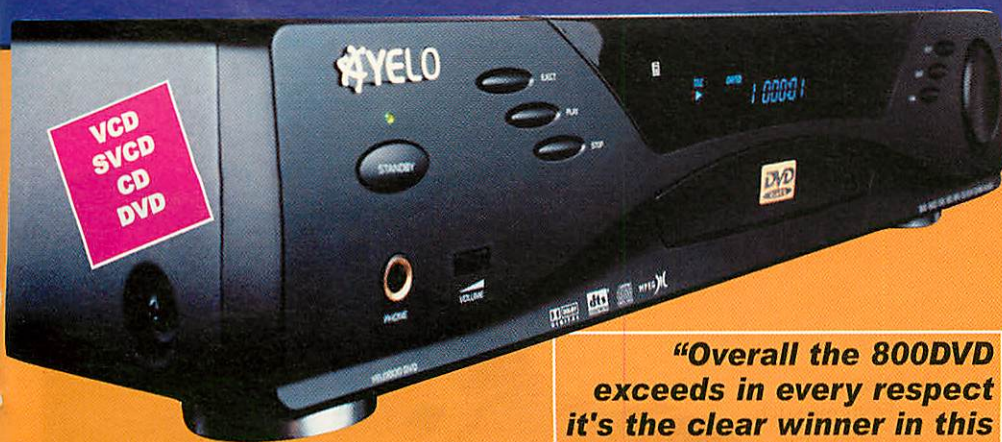
2) For Avid online, ensure the "Tape EDL" box is clear; for tape online tick it.

3) For the first EDL, these are correct; for Optima tracks 3 & 4 change as below to make a second EDL.

4) Drag this icon to your working disk (not directly to a floppy)

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DVD Review Nov2000













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6.5 Inch speaker
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found several niches with a diverse range of companies and organisations. These include broadcasters, independent production companies, universities, colleges and schools. By deliberately limiting the image quality to about that of VHS tape, much more material can be stored in a given amount of disk space.

By comparison with other systems *Optima* can at first appear to be lacking in features. However the key to its continuing success is that it has been designed to provide what programme-makers *need* in an editing system — which is not necessarily the same as what (they think) they *want*.

One customer bought *Optima* after realising that an alternative with lots of bells and whistles was akin to a shiny open-top sports car — flashy and seductive at first glance but, ultimately, not very practical. *Optima* is successful because the key to offline editing is that the user is concerned with the content of what is being edited rather than the finished quality.

Offline video editing is like using desktop publishing to produce a magazine like *Acorn User*. All of the content, headlines and layout is determined at this stage on a standard desktop computer.

The finished content may be printed out on a laser printer or a colour inkjet for approval and checking, but the quality would not be good enough to sell. To produce the finished article you are reading, all the content is taken to a printing firm with very expensive equipment. They then reproduce the exact content at high quality, but with little or no creative input. The equivalent in video editing is called 'online' editing.

Systems such as *Optima* are, unsurprisingly, sometime known as 'Desktop Video'. One of the significant advantages of separating the content creation from the finishing process is that the producer or director is able to concentrate on being creative — telling the story — without needing to understand or be able to operate the more complex technology.



Getting back to the historical thread, and to skip on a few years and a few more video formats, the use of compression techniques and electronic circuit miniaturisation led to the introduction of a consumer digital video format in the mid 1990s — DV. This uses a fixed compression rate of 5:1, but all the compression is carried out 'intra-frame'.

This means that no temporal compression is used, and the resulting material can be easily edited at any point since each frame is fully described. One way in which the compression is achieved is to sample the colour information at a lower rate — 3.375Mhz average. Confusingly, the way this is achieved is known as 4:2:0, since the two colour components are sampled at 6.75Mhz on alternate lines. Technically, it should be called 4:2:0 / 4:0:2.

There is a very wide range of camcorders available, from the well-known names such as JVC, Sony, Panasonic and Canon. These miracles of digital technology are now readily available on the High Street and by mail order, starting at less than £500.

It's worth pointing out that the well-known High Street stores tend to be considerably more expensive than the specialist mail-order companies. Also the prices are so fluid that they can change from day to day. We have included a few mail-order companies in the panel you can contact for prices. Not only that but the prices you may be paying for other associated services and products could well be more expensive in the High Street. It pays to shop around.

Although often used by professionals on a tight budget, most of the consumer camcorders are wholly unsuited to professional use — sadly, rather than insist on shooting with professional crews and equipment, many producers allow relative amateurs to shoot whole programmes with the excuse that using consumer equipment is the only way to 'get close to the action'.

The result is the plethora of badly made documentaries which now litter the schedules — they may have good quality pictures thanks to the DV format, but would anyone really argue that letting someone completely untrained and inexperienced loose on a powerful computer graphics workstation would result in a masterpiece?

The cheaper consumer camcorders are wonderful for their original target market — making home movies easily with good picture quality. However, just as a professional photographer uses much more expensive equipment than you or I might use for holiday snaps, the TV professional usually uses much more advanced camcorders.

To cater for this, both Sony and

Where to get your consumer Digital Video supplies

Empire Direct	0870	www.empiredirect.co.uk
ASK Electronics	0870	www.askdirect.co.uk

And don't forget that the High Street stores will, in general, have much higher prices than specialist mail-order companies. Plus the smaller supplies can also give better prices with their particular speciality.

Panasonic introduced 'professional' variants of the DV format, know as DVCAM and DVCPro respectively. The camcorders for these formats usually have manual control of all the features which are automatic on the consumer models, such as focus, iris, audio level and so on.

Professional users have no need for many of the so-called 'features' of the consumer camcorders, particularly ones of such dubious value as a 400x digital zoom — where what you end up with is a shaky, pixellated blur. A big issue now is the use of 'widescreen' mode, which consumer camcorders achieve by ignoring a quarter of the picture height, and then magnifying the resulting lower-resolution image until it fits the widescreen ratio. Professional cameras have image pickup chips which are the correct wide aspect ratio to start with, and so retain the full resolution.

One of the key features of a DV camcorder — assuming you want to do more than just shoot and play back — is its ability to output material to another machine or a computer in native DV format. This is achieved through the use of a 'DV out' socket, commonly known as 'Firewire' (an Apple trademark) or 'iLink' (Sony's brand name) or, to use its official standard name, IEEE-1394.

Using this connection allows copies to be made with almost no loss of quality, so that the edited version is as good as the original footage. Some camcorders also allow 'DV in' which means the finished programme can be copied back to digital tape for archiving. However, if you plan to do a lot of work in this way, you should consider investing in a full DV recorder, since the tape mechanism in the camcorder is optimised for recording, and may be damaged by repeated shuttling and playback.



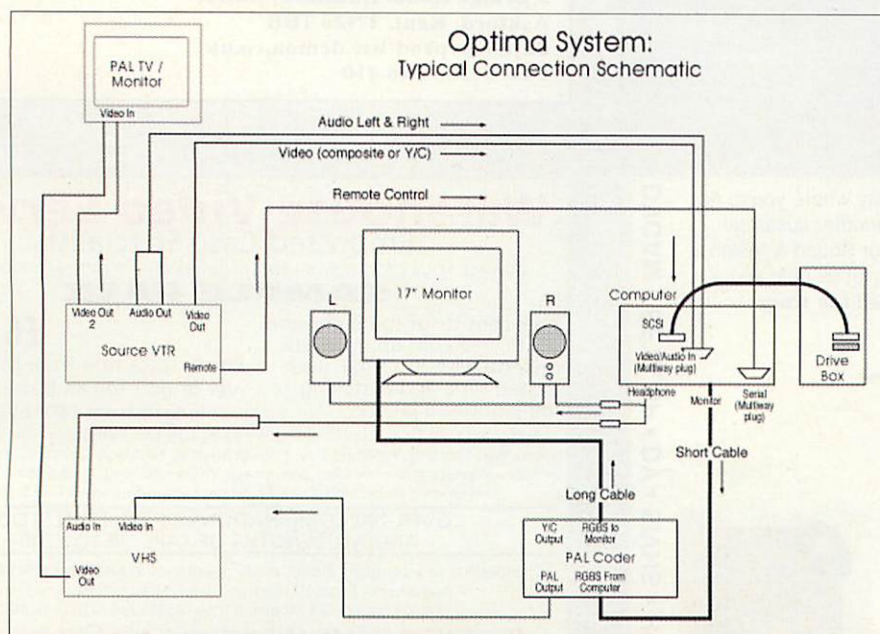
Because of the wide and cheap availability of DV equipment there is a trend in the industry to promote 'all-in-one' packages which, as well as the initial editing, also have the finishing tools such as image processing, colour correction, graphics and sophisticated audio processing capabilities. These functions are only needed for 10% or less of the total editing time, but all too often get in the way and make the whole process more difficult than it needs to be. Many of the editing packages now available make a big noise about all the effects they offer — when 90% of all television is produced using no more sophisticated effect than a straiaghtforward dissolve. I include this as a note of caution for those of you using or planning to buy desktop video — just because a feature exists, doesn't mean you should use it.

One of the best basic packages — which also includes all the effects and other gizmos — is available completely free if you buy a Macintosh computer. Apple's *iMovie* is able to import and edit DV material, then export it back to tape. Even more useful nowadays is the ability to re-process the finished piece and output it as a DVD. This capability — iDVD — is also included free with the higher-specification Macs, which come with a hybrid 'super drive' able to write to DVD-R discs.

Unfortunately, we are about to be plunged into yet another 'format war' with recordable DVD variants, so far at least three different re-writable formats are being promoted — with only limited compatibility. Perhaps it is just as well we are out of this one and can side with the one that wins.

To end, the most important thing to remember about all of the various technologies — soft and hardware — is that they are no more than tools to help achieve your objectives.

Before making any decisions therefore, you need to define the objectives, then research the options to decide which of them are the best fit. **END**



Appropriate technology: Define the job, then use the right tool.

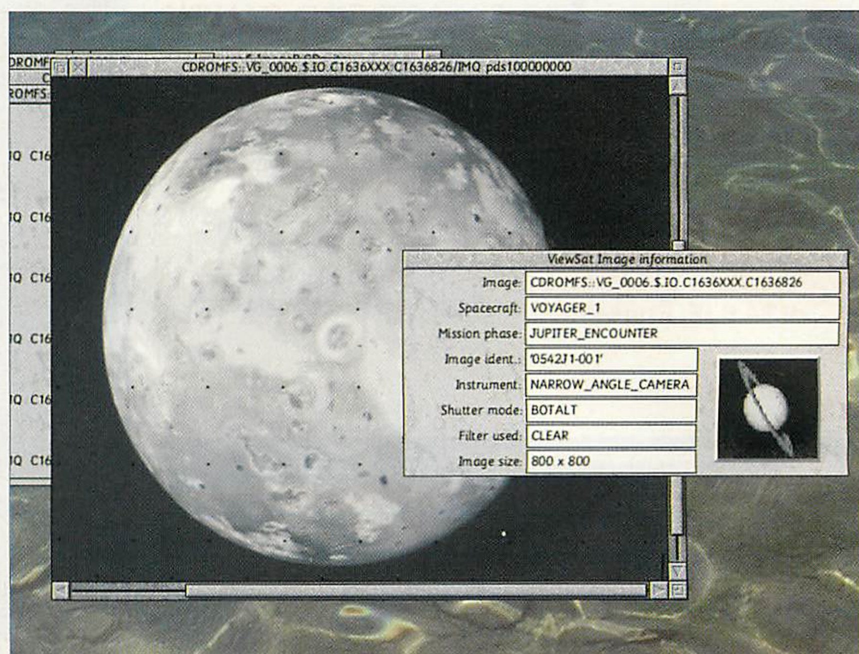
Real planets

Mike Cook checks out more NASA images in his final instalment

trangely one of the first CD image sets from NASA follow a format not followed by subsequent ones, these are the Voyager ones chronicling the flights to the outer planets.

Maybe it is because NASA were new to this sort of thing, or perhaps CDs were just too expensive in the late eighties but this set features compressed images. All other sets have images in a flat bit map format, that is there is an array of bytes corresponding to pixels somewhere in it.

As we have seen in past months it's mainly a matter of teasing them out. The Voyager series however, have image files compressed, its camera produced images of 800x800 pixels with 8 bits per pixel, this would normally take up at least 625K per image not counting any header. These are squashed down to 224K, a ratio of about 2.7 to 1.



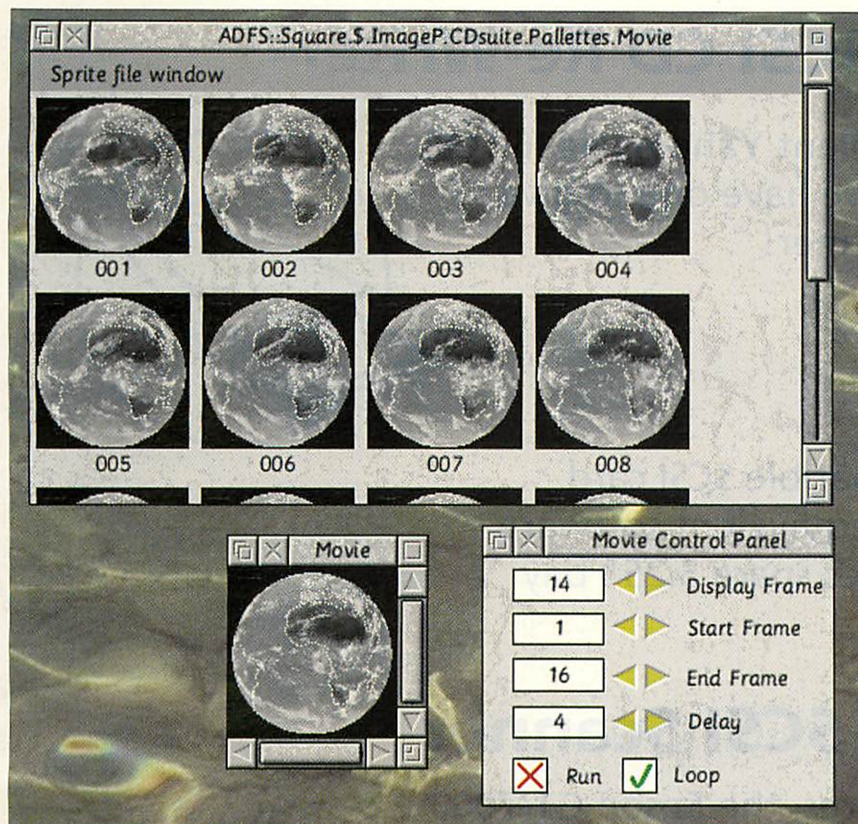
True, by today's standards, that compression is not great but you have to realise that this is a lossless compression we are talking about, so that the unprocessed files will contain all of the original data, warts 'n' all. You can get much higher compression with lossy techniques like JPEG but you don't get out what you put in and there could be valuable data buried in the noise that some day you might be able to extract.



However, decompression can take some time especially on the earlier computers so every three CDs there is a browse folder containing all the images for those CDs in a reduced 200x200 format. Along with the header these come in at only 64K each.

Now these small files can be processed with the tools I have described so far, and there is some C code on the Web site illustrating the compression techniques along with some documentation. However, Gerald Osbourn has written a Desktop application called ViewSat to provide a drag-and-drop solution to the problem.

What's more he even wrote it so that it would accept palette files from my utilities, and it contains its own histogram manipulation tools. Also the header contains useful information about when the image



was taken and through what colour filter, this is essential when trying to reconstruct a composite colour image.

My favourite sub-set is volumes 6 to 8 which contain the Jupiter fly-bys for both space craft. These are the best images and contain lots of detail. When you get onto the volumes of Neptune and Uranus there are many images that just look blank or blurred and with the planets being so bland there is really nothing to look at until you get to the few images of Triton.

There is an index file on the discs with a list of file path names in the order they were taken. Many years ago I wrote a program that read the index file and displayed the browser version of these files one after the other. It gave a real sense of a frail spaceship hurtling its way past planets. However, as this was not for the Acorn platform so I can't share it with you, but it's a project you might consider doing.

The set has now been extended beyond the initial 12 volumes of selected images to include all the images taken by the two craft.

You can get a sense of the space craft moving by using the last application in my image suite Movie. Like most applications I write its aims are modest and it is designed to be used with other applications. Put simply it shows each sprite image, in turn, from a sprite file.

You make the movie by using Paint to create combined sprite files of the individual images named sequentially with numbers starting 001. The example on the CD was of some tiny images gathered from a European Space Agency CD of selected metorsat images and shows world weather developing over 16 days. My favourite sequence in the Voyager set is only five frames long and shows Jupiter's satellite Io emerging from behind the shadow of planet. You can also make them to show the swellings of the cloud belts on the planet itself.

That brings me onto the CDs themselves, on the June CD was a snapshot of the NASA Web site from where you can order these discs. However to these has been added some information not available from NASA, and that is an indication of whether they will work on an Acorn machine. You see these discs are all ISO9660 standard and as such you would expect them to work without any trouble.

Sadly they won't, those lads at Cambridge only implemented the minimum ISO standard and the normal Acorn system won't cope with extended attributes. A year or so after the Risc PC first came out I initiated a heated debate between Acorn and NASA as to what constituted the standard. Neither side backed down but more recent NASA offerings haven't used them.

However there is a way to see those disc sets that have been denied us for so many years and that is to use the CDFS from WSS. I contacted WSS early in the development of this product and did a bit of begging to get extended attributes included, so now I can view the Venus set on our favourite machine.

Finally don't forget the non-imaging CD sets NASA has to offer, of these my favourite has to be Selected Astronomical Catalogues, here you will find many text files giving the position of stars and other objects.

I once did a project to make a chart of the night sky as seen by someone with infra-red sensitive eyes, using the IRAS point source catalogue. The result was a very sparsely populated sky apart from the dramatic swathe of stars the compose the Milky Way.

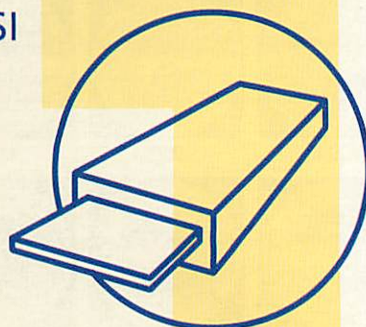
But here you will also find catalogues of galaxies, blue stars, carbon stars and planetary nebula, and perhaps the most intriguing a catalogue of dark nebula. These are opaque clouds of gas that block out any stars behind them, the most famous being the Horsehead nebula.

With these catalogues you can make your own observing programs or plot out specialised finder charts. You could combine visible star position with infra-red or X-ray images. In fact with these tools you can go on your own private expedition to the limits of our knowledge. These CDs and tools aren't for those who want the guided tour, but for those who want to dig a little and see things before they were polished up and sanitised.

Happy boldly going. **END**

Yamaha 4416 SCSI CD Re-Writer

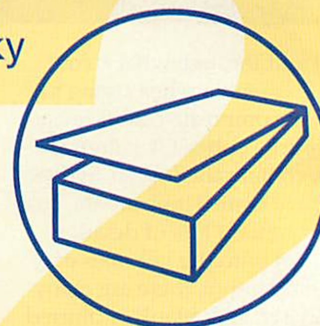
First prize is the excellent Yahama 4416 SCSI CD Re-Writer drive, we have one to give away to the lucky winner!



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- 4x Re-Write Speed
- 16x Read
- Requires Acorn compatible SCSI card
- Requires CDBurn or equivalent software
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Epson GT-7000 SCSI Scanner

Second and Third prizes, the Epson GT-7000 SCSI scanner, we have one each for two lucky readers!



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- maximum 9600dpi resolution
- optional film adapter
- Requires Acorn Twain drivers
- Requires Acorn compatible SCSI card

To enter the competition just answer the following question: Which company manufactures the video camera on the cover of this monthh's magazine? (a) Sony (b) JVC (c) Panasonic

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YES! I would like to be entered for this competition:

The company that manufactures the camera is: a b c (circle one option)

Name: ....

Address: ....

.... Post code .... Country ....

Tel: .... E-mail ....

I would also like an additional discount 8-issue subscription to Acorn User magazine:

UK £25 ☐ Europe £30 ☐ World £35 ☐

Card number ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ Expiry date ___/___

Your name as shown on card ....

Need some cache?

Ben Levens explores the abilities of the new ImageSoft packages

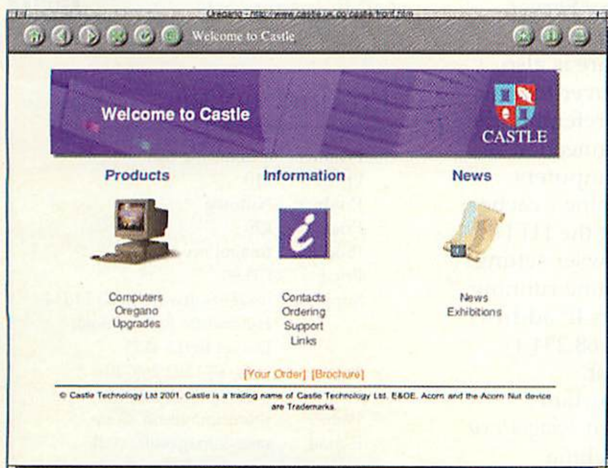
I am sure many of you have used *Oregano* in one form or another, be it the demo version of the wondrous multi windowed full version. It's a good Web browser, a little expensive, but it's a necessary piece of software for any sensible use of the Internet (not taking sides, I use *WebsterXL* a lot as well).

I'm not here to sing the praises of *Oregano*, I believe the use of a browser is nowadays simply a matter of user preference. But it is missing a vital part of the browser puzzle: Cache.

A cache (in general) is a place for storing frequently used objects. In the case of processors they have a cache which stores frequently used instructions or memory locations. In the case of Web browsers a cache stores pages, images and anything else that could be downloaded from the Net and might be used again.

Storing Web files enables you to re-visit a site a lot quicker than the first time, as it will only fetch files that have changed since the last time you visited — in most cases this saves you having to fetch the graphics, which are the majority of most pages.

Also, with graphics, most Web sites repeat the same graphics on different pages so once you've got them in the cache building new pages is quicker.



Graphics are a large portion of any site – repeats should only be loaded once

However, relative newcomer to the RISC OS market, ImageSoft do have a solution to the problem. In fact they offer three solutions to the problem, and I'll assess each one of them in turn.

The different packages are: *Cassia*, the basic cache; *Nutmeg*, a more advanced cache; and *ImagePrxy*, HTTP Proxy server (essentially a multi-user cache), and they all come in a rather unique form of packaging.

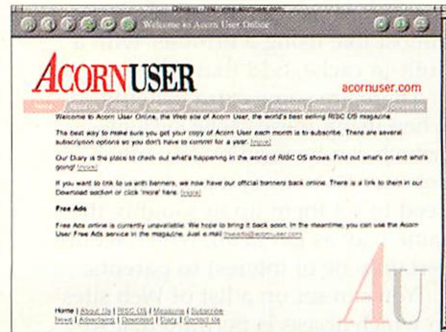
Each package consists of a quite weighty card, printed on both sides with installation instructions and the purpose of the software on the back; with the software on a floppy disc located in a little plastic wallet stuck to the front. A very basic design, but one that I feel is very practical and functional — but certainly adequate.

Show me the money

Now, *Cassia* and *Nutmeg* are basically the same piece of software, indeed *Nutmeg* actually registers itself with the Task Manager under the name *Cassia*, and I'll discuss these first.

To install either of these you simply place the floppy disc in the drive, view the contents and copy them over the top of your existing copy of *Oregano*. This will update *Oregano*'s !Run file to automatically start Cassia when *Oregano* starts.

Once you have done this you simply start (or restart) *Oregano* and immediately the cache system is running. You do need to set up Oregano to use the cache afterwards, which is simple enough to do, but I feel it is only fair to point out that it wouldn't have been hard for ImageSoft to get this done automatically as well.

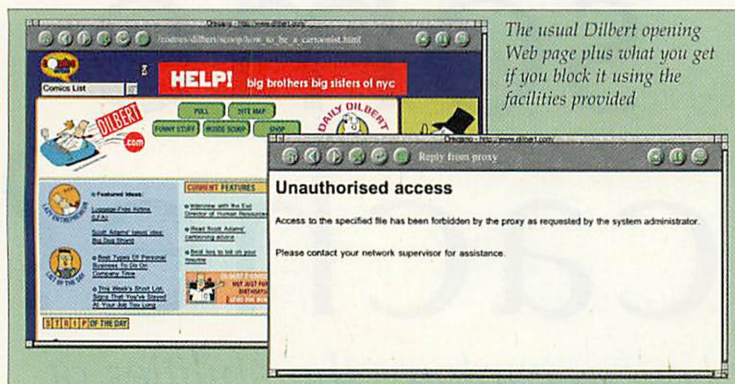


A streamlined Web site loads fast anyway

Anyway, once *Oregano* is running you simply bring up the iconbar menu and click on *Choices*. You need to tick the HTTP Proxy checkbox and set the contents of the writable icon to localhost:8080 (don't forget to click save). All you need to do now is browse away, happy in the knowledge that you'll either spend less time on line or access more sites.

I found the performance of the cache system to be highly acceptable and was happy visiting the new *Acorn User* Web site as well as our own, and a few daily sites, **Dilbert.com** and the Web-based control panel for our server. Having done this, it was obviously only fair to start my machine again re-visit these sites.

Now, both the Real Ingenuity and *Acorn User* sites are highly streamlined so access is quick anyway, but I did still notice an



The usual Dilbert opening Web page plus what you get if you block it using the facilities provided

improvement when accessing them. **Dilbert.com** has quite a few objects on the home page and the difference in speed for this was incredible — almost like using a browser with a built-in cache, odd that.

There are some extra benefits when using these cache systems (which can be used by any other browser on your system, you just need to set them up in roughly the same way as *Oregano*), which would certainly be of interest to parents.

You can set up a list of Web sites to which access is permitted, a so-called White List, or you can deny access to various other sites, configurable by URL, host name or word content. This obviously enables you to prevent access to various "Adult" sites and quick test blocking **dilbert.com** from being accessed worked a treat. Instructions to do this are included on the packaging and you can change the Deny settings while the cache is running without the need to reset it.

That covers the extent to what *Cassia* and *Nutmeg* can do, apologies to ImageSoft if I've missed anything, but now it's time to discuss the difference between *Cassia* and *Nutmeg* (aside from £10).

Nutmeg does everything that *Cassia* does, with one extra feature: You can save out visited sites. This may not seem like an amazing thing to do, but can be very handy when trying to find something specific that you know you have visited. Not only can you save out a site, but you can actually pick specific files to save.

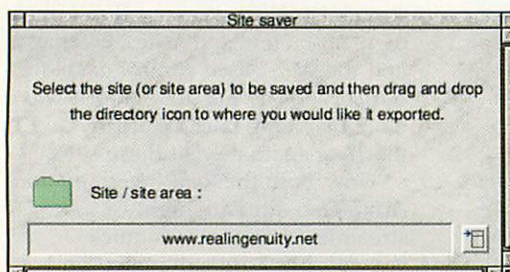
Both *Cassia* and *Nutmeg* will kick-start R-Comp's *DialUp* if you are not online and trying to access something not in the cache, which is always very handy.

Sharing your funds

As I said earlier, there are three applications being reviewed here, all of which act as file caches for Web browsing. The final product in the set is *ImagePrxy*. This is by far the more important of the three packages for a household with more than one computer, as it enables multiple computers to access one Internet connection (sharing), while maintaining just one copy of the cache system.

Imagine, if you will, that you are an IT administrator of a school, and you need to prevent the school children from accessing "adult" material online, while also trying to keep your bandwidth down (or at least streamline it). You can do all this using an HTTP Proxy Server, which is what *ImagePrxy* is.

Setting up this software is also really easy. You copy it over to your computer's hard disc (preferably the one with the Internet connection software) and run it. Computers utilising this machine's cache simply need to set the HTTP Proxy in their browser settings to access the machine running *ImagePrxy* using its IP address (for example 192.168.254.1) instead of localhost.



One of the important features here is that *ImagePrxy* will serve any machine connected to the network, providing all the necessary filtering, regardless of the type of machine accessing it. It could be a Windows PC, a Mac, a Linux machine, whatever you want.

How's your investment

All in all, I would say that the software is very good, and the option of three gives a perfect choice. For the basic home user use *Cassia*, just £10 all inclusive, and it will save you time. If you want a bit more, such as the ability to save sites, you'll want *Nutmeg*, £20 all in. If you are an education, business user or someone running multiple machines at home then ImagePrxy will be the ideal way for you to use just one connection to the Internet.

Don't forget that all three pieces of software provide a means to filter out sites, so can be used at home to block porn, and at work (using *ImagePrxy*) to block access to (comedy) sites that may waste some of your employees valuable time.

Are they value for money? This is a good question. They are certainly a reasonable price but with the next version of *Oregano* imminent, which is reputed to include a Cache system, you may want to think twice before purchasing *Cassia* or *Nutmeg*.

But *ImagePrxy* is a little gold mine. It costs a bit more, £39.99, but if you have a network, *ImagePrxy* will save you having to reload pages again and again on the various machines. Very handy. It even comes with an unlimited user site licence, so it immediately becomes ideal for School or Business access, without having to worry about 'per-seat' licensing costs. END

Product details

Product:	Cassia
Price:	£10
Product:	Nutmeg
Price:	£20
Product:	ImagePrxy
Price:	£39.99
Supplier:	Image Software (UK) Ltd, 48 Hinchcliffe Road, Poole, Dorset BH13 4ED
Tel:	(+44/0) 1202 269720
Fax:	(+44/0) 1202 685072
Web:	www.imagesoft.co.uk
E-mail:	sales@imagesoft.co.uk

KRPC300 Update

Mike Tomkinson takes another look

My review last month of the new Kinetic Risc PC 300 raised a number of questions so this month I interviewed Jack Lillingston of Castle Technology and covered territory both old and new

In the original article and based on data given in the booklet provided by Castle I agreed that the Kinetic does run at a blistering 300Mhz. However, I stated that this was a combination of the 233Mhz Rev T StrongARM processor and the 66Mhz SDRAM.

In actual fact owing to the efficiency of the Intel chips, some cooling via a heat sink, an onboard fan (on the Kinetic board) and some clever engineering the processor is actually clocked at 300Mhz. Notice I do say clocked and not over-clocked as is common practice in PCs.

The processor has actually been tested at over 40 degrees C ambient temperature, above the capabilities of the disc drives, and works like a dream. I can assure you that at that temperature you would be most unlikely to be working on a computer — even an Acorn.

Jack let slip in the course of the interview the interesting snippet that the Castle technical boys have actually had a Kinetic running reliably at 330Mhz. Given that Jack does not normally just let things slip I wonder what is next in line in speed terms from Castle?

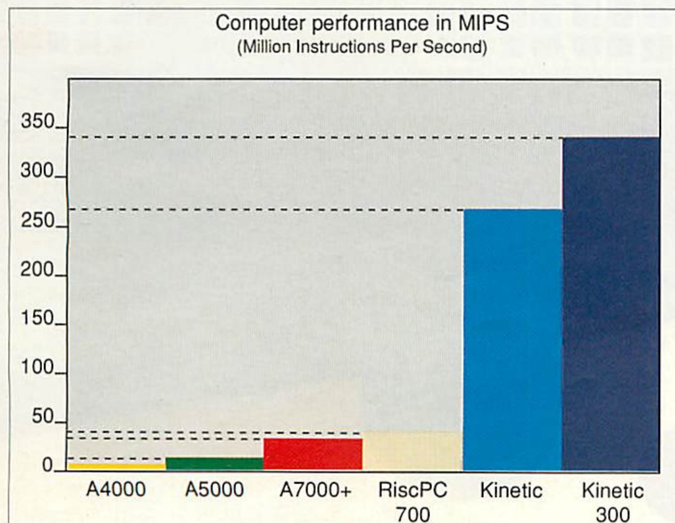
I bemoaned some of the software which is still released on any Acorn you currently buy. In particular the grainy graphics of Shuttle launches, raft trips and Lion fish. As I alluded to in the original article it is a question of licensing and to a certain extent backwards compatibility.

Frankly I would be unhappy if I were Castle having to put such poor stuff on the hard disc and Jack agrees but to change the licence agreement would take time and cost money. I agree that this would be better spend on R&D so we can have nice fast Kinetic Risc PCs. I suppose its a question of deciding which battles are worth fighting.

On the subject of software I questioned the decision to only put a demo of Oregano on the hard disc and have users upgrade via a card system.

Again, it comes down to licensing and the fact that Oregon require all users to register personally on the Web site and include their address so that they can be kept current on updates.

I know that sending cards via Postman Pat seems a little old hat in the days of e-comms but it provides another way of protecting the investment in new software and we all know how little there is of that these days in the Acorn market so good luck to them. Castle assures me it works well and with no customer resistance.



Jack tells me that Castle agonised for a long time about the question of including a DVD drive in the Kinetic. The decision was based on earlier experience where software was developed that meant users were forced to upgrade hardware to take advantage of it. In part it was an attempt at trying to future proof the hardware which given its longevity is not a bad thing.

I still think that it would be better to drop this idea — I do not hear of anyone developing software or hardware to allow us to watch DVD on an Acorn. I am not saying it will never happen but do not hold your breath.

This was my quibble that to charge £5 extra for the feet to allow the Kinetic to be used in tower mode seemed a little churlish on a machine costing the very thick edge of £1000. Jack tells me that even Acorn stopped supplying feet on single slice machines about the time of the Risc PC 700 launch.

The reason? Well it seems to come down to stability — it seems too many users were knocking their beloved machines off their desktops as they were inherently unstable in the gravitational sense. Castle do provide feet free with the 2nd slice — £76.00 plus VAT.

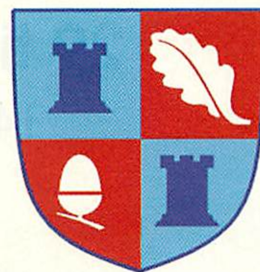
It depends on how you want your Kinetic — aesthetically it looks silly on its side to me and makes far more of a statement about your good taste and common sense in desktop mode.

Finally the graph reproduced from the Castle web site in my original article was for the 'ordinary' Kinetic Risc PC and not the Kinetic Risc PC 300. On this page is the graph showing the Kinetic 300 compared to other Acorns in terms of MIPS.

Well let's hope that extra information really gets everyone out buying the fastest Risc PC on the market. **END**

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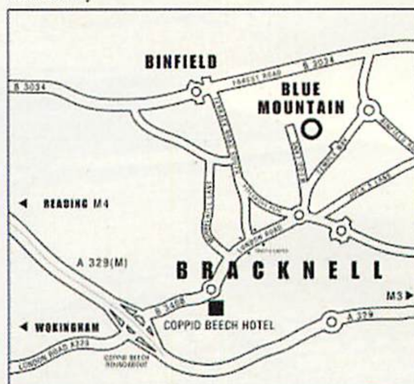




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Endless fonts

John Cartmell sees what you can do to increase your range of fonts

Never use more than three fonts in any one document. Excellent advice. I've taught this many times — and almost as often I've been ignored. Using many more than three fonts is (almost) invariably a sign of a crass amateur, although I have to admit that there appear to be many such amateurs around claiming, if not earning, a professional wage.

Electronic Font Foundry (EFF) produce an application that will convert (nearly) any TrueType font, like those used on PCs, into a RISC OS font. The application is *effTTT*.

So why should you purchase an application whose sole use is the addition of even more fonts to your system? Perhaps we'd better take a closer look at our first proposition.

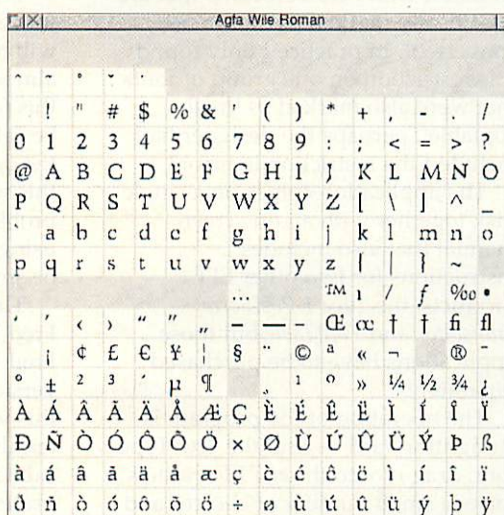
Certainly the true professional designer will limit her use of fonts; she will also ensure that the fonts used are those best suited to the audience. A font suited to a physics text book will not be the same as one used in a presentation book discussing design ideas of the 1920s, while both will differ substantially from one used in a worksheet for seven year old children. A magazine (like *Acorn User*) will assess its audience and will use a font (or limited range of fonts) appropriately. Real humans, like you and me, wear many hats and need to have a wide range of fonts available to suit any of the myriad of audiences that we regularly face.

Not only that but we also find situations where we need a font that we just don't have. One such was my need for a picture font of chess pieces to illustrate my instructions for the circular chess game that I produced. Another type of font that I constantly search for is one that mimics the style of writing that is taught in a particular school; a hand-out that uses the appropriate style is one step easier for the kids to read — and ensures they can concentrate on the subject in hand.

Finally it's possible to break the three fonts limit and still produce a good design. Before you take this as an all-purpose green light and just in case there are any font pedants around, you need to ask yourself this question: "Can I really justify this fourth font, or am I behaving like a 13-year old with a new toy?"

It's the need for that special, one-off, font that gives *effTTT* its reason for being. You can always buy an excellent range of fonts — from EFF itself, APDL's iSV collection and so on, or find a PD version from the Harry Decker site (there's a copy of the site on the Acorn User CD9 from March 2000, although the current site has even more fonts available).

But no matter how extensive the range of your collection there will always be one more that you need. And although you may not be able to find that font in a RISC OS collection there is a fair chance you'll be able to get it from a PC source.



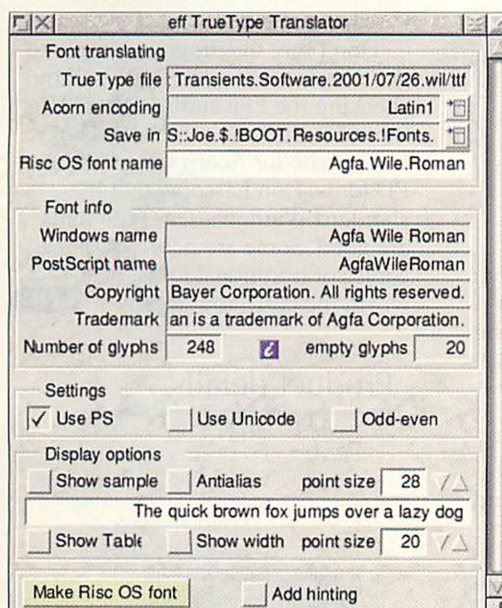
That's where *effTTT* comes in.

Take a TrueType font and *effTTT* will make a copy of it as a RISC OS font. In seconds. Just like that. It won't look as good as a well produced, hand-crafted, RISC OS font — on screen. On the printed page I honestly can't tell the difference.

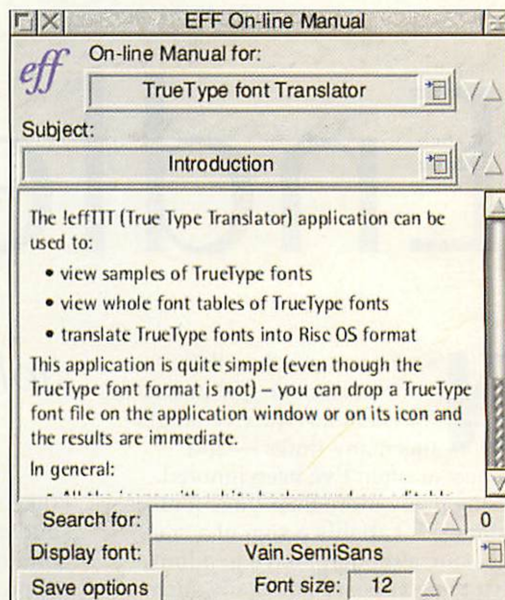
One thing that you can be sure of is that it will look better than its original version on screen — but that's Acorn's bit of magic rather than any from EFF.

Problems?

There are some fonts that *effTTT* simply wouldn't convert but this seems to be a problem with the original font rather than with the application. In the end some fonts simply weren't worth converting and to be quite honest I could do without any of the fonts I have produced



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using *effTTT*.

Whenever I used fonts from a good source I had no problem converting the font; for example the Bitstream TrueType fonts on the disk that came with my Canon printer all converted with no difficulty. EFF have included a block in the program so that it won't convert fonts that are specifically marked as 'not to be converted'. In practice I only found this restriction on one group of fonts that were also marked as 'freely copiable'; perhaps the designer had included the restriction in error?

The application comes on a single disk together with an on-screen manual that also includes instructions for two other EFF products, the *Type 1 PostScript Translator* and *FontTable* but those applications have to be purchased separately.

The operation of the program is straightforward — find the TrueType font, drag it onto the *effTTT* window, make a small number of choices and click on a panel for the RISC OS font to be produced and saved in your font directory. It is all fully explained and the only likely problem seems to be in naming the new font and deciding where to save it.

Perhaps the most likely problem might be if you are converting a family of fonts — for example, normal, bold, italic and bold italic versions. As Truetype fonts these will be four separate files but you will want them saving as RISC OS fonts in a single directory and you ensure this is done correctly by getting your naming procedure correct.

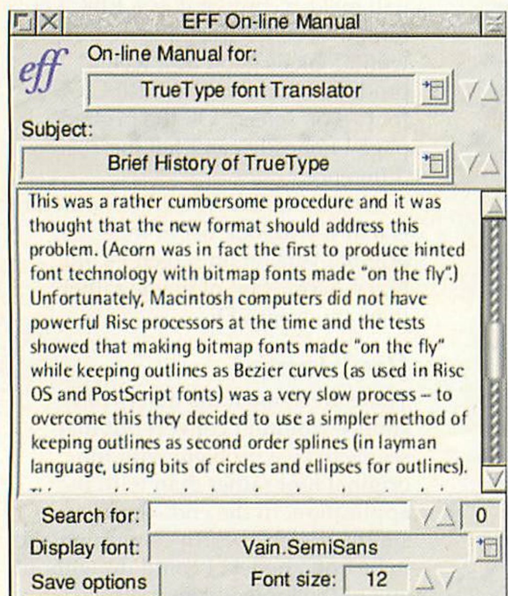
When you load the TrueType font a suggested RISC OS name will be produced and you will almost certainly have to alter this for best results. A font may be called Fred.Flintstone.BV. As the dots indicate a directory level this will almost certainly cause problems with some applications using the font and the name needs to be simplified, to just Fred.

The italic version would then be Fred.Italic, the bold version Fred.Bold and the bold and italic version Fred.Bold.Italic — named in this way all members of the Fred family would reside in a directory called Fred just like other, professionally produced fonts.

The other tricky bit is where the fonts are to be saved. Although RISC OS expects fonts to reside in a single *!Fonts* directory many of us have fonts hidden in additional places (for good or bad reasons) or use a specialist program that stores fonts and turns them on or off as required. I use *EasyFont Pro* from APDL.

The *effTTT* application knows about all your font directories that have been initialised when the machine booted up and allows you to save your new font in any of those areas. For safety sake I saved the new fonts into the !BOOT.Resources.!Fonts directory rather than directly into the *EasyFont Pro* directory. Those fonts I decided to keep were transferred later using the standard *EasyFont Pro* loading system and the rest deleted.

The *TrueType Translator* picks up many pieces of information from the original font including its Windows and PostScript names. The latter is particularly useful to note in determining the name you give to your RISC OS version and in using it to copy styles used elsewhere. It also indicates the number of glyphs in the font (and the number of empty glyphs). As a rough estimate you can use glyph to be synonymous with character but some characters such as the copyright symbol may contain 2 glyphs.



The program lets you see the set of characters or a sample sentence and producing the font is a simple click. Dead easy. However choosing good fonts is far, far harder.

Is it worth the cost? It costs £47.59 with VAT and post and that's not cheap but neither are good fonts. If you can obtain the fonts you need as a TrueType font *effTTT* may be your answer. It may be worth considering buying the Type 1 converter (for £35.84) if you can obtain a Type 1 version of the font.

Don't buy the program simply to get a basic set of good fonts without checking the EFF and APDL's iSV font CDs first and search the Harry Decker site (or Acorn User CD9) for PD fonts. Don't assume that the standard Windows TrueType fonts are good. Some are poorly designed copies of traditional fonts. Is it worth the cost? You decide. **END**

Product details

Product:	effTTT
Price:	£47.59 inc. VAT and p&p
Supplier:	EFF, 11 Silwood Road, Ascot, SL5 0PY
Tel:	(+44/0) 1344 875 201
Fax:	(+44/0) 1344 875 202
E-mail:	fonts@eff.co.uk
Web:	www.eff.co.uk

RISC OS Rambles

Mike Cook buys another round for RISC OS users

Things have been a bit quiet on the problems front with a sudden drop in my mail bag over the last few months. This means you are all getting smarter so why not share some of those hints and tips that made your life easier. Remember this is your page and I welcome feedback and discussion.

Anyway let's kick off with a bit of feedback from a few miles up the road from where I live comes Alan Metcalfe in Accrington, he writes:

I "In reply to Jim Smyth's question about converting Corel Draw files to Acorn Draw format. The latest version of *Xara* now *Xara X* and formally *CorelXara* from those nice people in the manor house in Hemel Hempstead, will do the job.

Sadly it's a PC program but if you want to put Jim in touch with me we could arrange for him to send me his CDs and I could convert them for him and send him Acorn Draw versions back to him on a couple of new CD's."

A very generous offer there you could end up with a right little earner if there is demand for this service.

Graham Stewart is a newcomer to the magazine, it‹s quite some time since we had one of those, he wants to get to grip using the serial port, he writes:

Q "I was wondering if you have written any articles in *Acorn User* magazine on the basic use of the serial device port and sending any AT commands in BASIC for example simply sending telephone number down to the modem. I would very much appreciate you assistance in getting a better understanding of how to communicate with a serial device.

"I understand that you did an article in April 2001 and made references to previous *Acorn User* magazines December 98 and February and March 1997. I have recently been buying the magazine and I have not got any of the previous years. I would appreciate you assistance in this matter. Is it possible to get CD versions of previous years for quick referencing?"

A As you say I have covered this many times in the past, what you really need is the Programmers Reference Manual which is available on CD from RISCOS Ltd (check their advert in this issue) so there is really no excuse. But just for you here are some simple BASIC fragments to get you going.

```
10 REM Serial I/O Handshaking test
20 REM Initialise Serial Port
30 SYS"OS_SerialOp",0,&04,&FF00 :REM Handshake setup
40 SYS"OS_SerialOp",1,0 :REM 8 data 1 Stop no Parity
50 SYS"OS_SerialOp",5,8 :REM RX baud rate to 19,200 Baud
60 SYS"OS_SerialOp",6,8 :REM TX baud rate to 19,200 Baud
70 SYS"OS_Byte",2,2     :REM enable serial buffer
80
90 REM put the byte to send to the serial buffer into A%
100 SYS"OS_SerialOp",3,A% :REM Send a byte
110
120 REM Get a byte from the buffer
130 REPEAT
140   SYS"OS_SerialOp",4,256 TO ,B% ;C%
150   C%=C% AND &2
160 UNTIL C%=0
170 REM B% now has a byte from the buffer
```

John Greenwood from Loughborough, or as he puts it "in the middle of England" wants to do some instrumentation in a high level language:

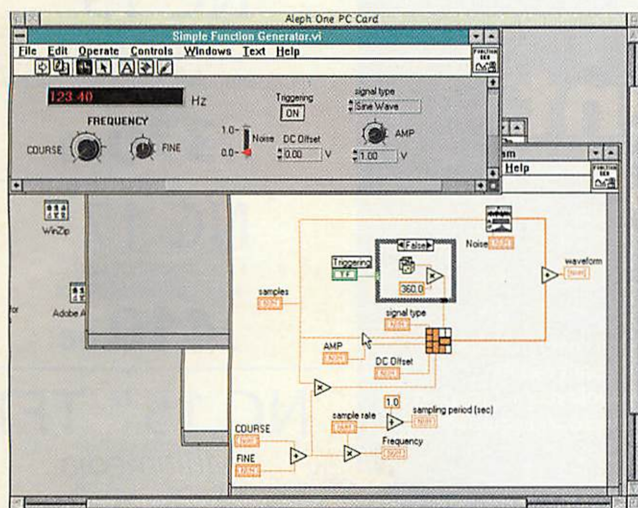
Q "You may remember a bit over a year ago I asked a question about data logging and *LabView*. Since then I have got a National Instruments board and *LabView* and a PC to run it on. NI seem to have a policy of making their stuff interchangeable between several platforms using PCI slots.

"Would the Omega provide the necessary hardware? I gather that a lot of NI boards/software/PC combinations end up as stand-alone single-purpose instruments. In many cases they would be more efficient with an ARM-based solutions, for example battery powered. Do you think it would be worth suggesting this to NI? They would have to port *LabView* to RISC OS, are there any deficiencies that would make this difficult?"

A For those who don't know *LabView* is an icon-based instrument programming language. That means instead of writing lines of code to get a program to work you drag icons of functions around the screen and link them up.

While it may sound easy it still doesn't remove the need to think. It first appeared as a Macintosh-only application in the late 80s and cost a whopping £1,500 a time, far more expensive than the computer it was running on.

Since then it has dropped in price, migrated to the PC as well as Mac, acquired colours and has a large set of hardware interface boards. I used to use it with my students in the 90's,



LabView probably not coming to a RISC OS window near you

linking up some old Body Build projects like the 4-digit DVM through the serial port adaptor to make data logging instruments.

If you would like a low cost taster the book "LabVIEW Student Edition User Guide" by Lisa K. Wells (Prentice Hall ISBN 0-13-210683-3) contains a limited version. If you are a student it's cheaper and what's more it works on a PC card on the Risc PC.

Now the interface cards come in various guises but PCI is the most popular, they not the cheapest things in the world though. There is only one thing stopping you using it in an RISC OS-based PCI-equipped computer and that's the software.

There are no deficiencies as such to make the porting of *LabView* difficult, indeed it should be a much simpler task than it was porting from the Mac to the PC. However, due to the fact that is is a very specialist application and the limited size of the RISC OS market I doubt if this would be of any commercial interest to National Instruments. Can you see many people in this market being prepared to pay just under a grand for software?

Next Dougal Lythgoe is worried about the Tower of Babel effect:

"Contacting developers for last month's News column in *Acorn User* I was struck for the first time by the possible consequences of proliferating different RISC OS machines. It's a problem that seems likely to increase and we'd better tackle it head on.

"What bothers me is that although I know the RiscStation is different from the A7000+ machines (and the later Castle variations) and from Risc PCs (in various guises) I'm not sure that I appreciate all the differences.

"I know and understand the major differences between a Risc PC and an A7000+ but I'm getting out of my depth about some of the other differences. Can you help reduce my ignorance?"

Not a very specific question this, you know the major differences but what are the others? Basically all these machines are essentially the same with only minor variations being played out, this is because of the operating system.

One of the problems with making Acorn clones is that as the operating system is fixed in ROM the hardware has to look the same in all implementations. This ties manufacturers to using the same chip set and so most machines tend to look the same.

One way out of this is the approach that MicroDigital have taken, that is to make a hardware layer that interfaces between what the software expects and what hardware you want. The software option would be to modify the kernel, that's the software module that actually does things with the hardware.

However as only RISCOS Ltd have that source code it is not available to independent developers. So at the moment there is little danger in getting any great differences between the machines. This ensures compatibility but makes life rather dull.

Jenny Cuttle has been going through her archives:

"I've been wary about delving into old copies of *Acorn User* to experiment with some of Mike Cook's excellent hardware projects because I haven't wanted to risk accidents with my Risc PC.

"Now that older RISC OS machines are available at very low cost I'm looking at buying one just for project work. Which of the various old machines are likely to be best for project work, and why?"

Most projects use the printer port which is fitted on all machines. However some used the serial port which was optional on the A3000, so I would avoid those projects if it has not been fitted.

Finally the I2C interface was use on several projects and as the two wires for this can be tapped off the podule interface get a machine with a free podule slot. You can extract the signals off any podule card but it is best to have a free socket so you don't have to modify too many bits of kit.

Finally our very own news editor, John Cartmell, has a keyboard expansion question:

"I believe it's possible to reconfigure the keyboard and I'd like to make use of the extra keys on an IBM keyboard that I'm using (with a Risc PC). What's the easiest way of using the extra keys and can I get the extra functions to work from Boot? Alternatively can I use MenuBar (Graham Crow's) program to introduce or change the functions that I've allocated?"

I am a bit puzzled about this because the keyboard used on a Risc PC is an IBM keyboard and all the keys can be used. There are many ways to do this but perhaps the simplest is to use the event structure.

Event 11 is the key up/down event and this provides the raw code from the keyboard. You can then use this in a look-up table to replace the key code just put into the buffer. You will have to use the buffer insert vector to ensure you don't place the default character in but your remapped one.

Another method would be to tap into the International module and invent your own country. This essential performs the mapping between keys and codes. However this is more complicated, see the PRM for details.

END

Contacting AU

Mike Cook:
rambles@acornuser.com

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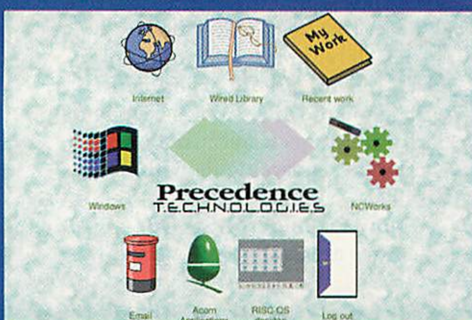
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Presentation boxes

Want to present ideas, proposals, books, homework? Here's a new application which Pam Turnbull gives a whirl

There was a time when presentation software was restricted to business proposals and training courses. This type of software is not new to the RISC OS market but there hasn't been a huge market with applications limited to uses such as a slideshow of images, statistics or information.

However, with the growing prevalence of interactive whiteboards in schools 'presentation' can be another word for 'lesson' as teachers use the technology as another teaching tool. It can also be used by students to deliver the information they have discovered in a different medium, thus experiments, research or books can be presented to an audience crossing curriculum areas and enhancing skills.

Added to this there are more job interviews where a panel will require a presentation. This can be a little difficult if you don't know what computer system they want this delivered on but *Textease* being available for, and TE files compatible across, PC and Apple Mac as well as RISC OS could be the answer to a tricky problem.

But is *Presenter* more than just another slideshow program?

Down to business

I was warned that the copy of *Presenter* which arrived on my doorstep was not quite finished so I was prepared for some problems, yet the program was very straightforward to install from CD-ROM. Loaded on to the iconbar in the normal way this opens to provide what to all intents and purposes a *Textease* screen.

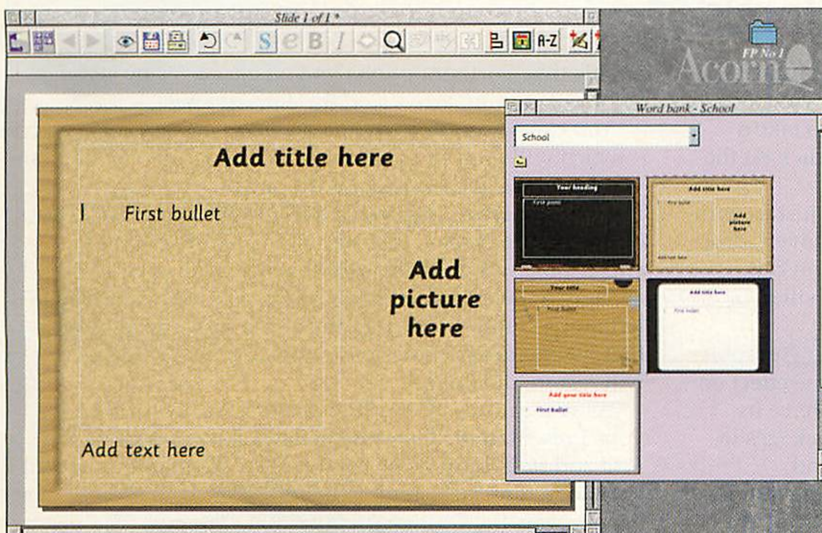
What gives you a small clue that something extra is going on are the new icons on the left. Closer inspection allows you to run your show, display a storyboard, as well as moving to the next and previous slides. More obvious still is when you open a new file a *Word bank* of prepared backdrops pops up.

These backdrops are categorised: photo, school, stationery, strong, subtle and themed. These provide some great ideas for starting off with which can be used as they are or edited. Simply choose one and your *Textease* page takes that image as its background and makes it a standard for the rest of the presentation.

Boxes have been incorporated into the design with prompts to be replaced by your text or images acquired from discs or via the *Picture Bank*. When finished click the next slide icon and another page with your chosen backdrop already in place pops up. Carry on until you've finished and then click on the storyboard icon.

You'll then be shown thumbnail images of all your pages with grey arrows showing the flow. You can swop the order of these very simply. Just select the slide to be moved and place the pointer over the selected slide so that it becomes a hand. Click and move. The new position is shown on the story board by a thick red line. Release the mouse button and the slide drops into place.

Delete a slide by selecting and pressing delete - all quite obvious really. Insert a slide pressing the Insert key, or change your chosen backdrop by dragging a new one over from the Bank. Satisfied then all





you need to do is click on the Run Show icon moving through the slides using the mouse, or the space bar or the arrows on the keyboard.

Neat, quick and particularly easy to use for existing *Textease* users. But is this alone worth £39? Looking for more value for money I dug a little deeper.

Getting under the skin

Having created a simple slideshow incredibly quickly I decided it was time to look at the online manual - printable and created in *Presenter* of course.

Here I realised that I could start with the Storyboard and then double-click on chosen backgrounds to place text and graphics. But I found my initial route more intuitive.

Exploring further I discovered *Settings* within the *Presenter* menu. *Fade Click* as you'd expect allows a choice of fades from none through rotating squares, pushes, lifts, turns and wipes. Make your choice and click on the *Run Show* button to see the fade as you click forward and backwards through the slides.

You can add a voice or effects or choose a pre-recorded sound to be played each time the slide is shown. With control over volume and looping. My early version didn't provide sound effects but hopefully the final version will.

The most fun is to be had from the bullets. As you type lines of text on to an empty slide during the initial design process you'll find that each time you hit return a new bullet point is created with the text automatically wrapping down to align correctly. Using animated bullet points you can have these pearls of wisdom appear one by one as the show proceeds. The bullets can appear in a variety of different animations and can be set for individual slides or for the whole show.

By default, the bullets are set for *Fade dissolve* which means that the slide appears with only the title displayed. Each time you click the mouse, or hit the space bar or the arrow on the keyboard, a bullet point will fade in and appear on the display. Once the last bullet is displayed, the next click will display the following slide.

For the nervous presenter, I was relieved to read that you can see a very faint outline of the next bullet before it appears so you will know when there are more bullets left for a particular slide.

You can alter bullets or opt to have none at all. This is achieved from the Text effect window via the Spacing tab. Set by default to No bullets, if you click on the arrow at the end of the bullet box you can select the type of bullet. The bullets can be further edited to suit your needs by selecting Edit Bullets from the list in the bullet box which will bring up the Bullet styles window, as

Using Textease standards

To make a simple presentation look stylish and individual you need to think about adding graphics, changing shapes and tweaking lines. The best starting point is to take a prepared backdrop and then select a box and click on the *Effects* button.

The graphics effect window will be opened just as with any *Textease* document. Here effects can be removed, drop shadows put behind a line, picture or shape. You can further enhance this shadow by dragging is position or changing its colour or even another shadow.

Alternatively you can pop a frame around any graphic object and this will let you create a double frame effect on rectangles, for instance. In turn this frame can have its thickness, colour and position set. I've used packages in the past where this can get very complicated and confusing but *Textease* by ensuring that the frame mimics changes in size and position that are made to its parent avoids this. Further options let you alter lines by style, colour or putting arrows on the ends of lines.

You can add your own images – clip art or photographs – which will then sit upon the backdrops. This can be done via the *Picture Bank* button or dragged from disc. Photograph type images may be cropped so that only part of the picture is seen. Just select the picture, place the cursor on any side of the selection box. The cursor will change to the cropping arrow as shown. Hold down the left mouse button and drag the arrow inwards in order that the picture becomes becomes cropped. Dragging out will restore the image.

As you can see all the *Textease* tools are available for your Presentation. Text can similarly be changed via the *Bold* and *Italic* buttons or via the *Effects* button if you want to change font, size, alignment and so on. The presentation page retains the *Textease* premise that each page is a piece

shown. I had limited success with this and this is an area which does need to be worked on.

Another useful facility is *Display Time*. Simply instead of clicking to move through a show, you have a timed exposure for each slide, with the option of looping the presentation only ending by pressing Escape or F5. A further useful option is the one where slides can appear in a random order - just check the box!

Less self-explanatory is the *Mouse edits slide* button. But if you wish to use the mouse during a presentation to edit the show as it is run, click in this box. You will then have to use the space bar or arrow keys on the keyboard to move through the slides. Useful for interactive shows (see below).

So far I had applied the settings to the whole slideshow, but I was glad to see that I could set fades and so on for each individual slide. This is down via the Storyboard screen. Clicking on those grey flow arrows allows you to access the settings window for that particular slide.

You can set the same settings for a group of slides too by selecting them and then accessing the Settings window.

Do it yourself

Having explored the prepared offerings I felt like trying my hand at making my own. Now you can always take a prepared one and change the elements you see there or create a completely new one. The starting point is the *Edit Backdrop* option from the Presenter menu. You're then presented with a blank backdrop window.

Clicking on the eye/*Looks* button and choose the Background tag will let you choose a paper colour. You may also tile any object here.

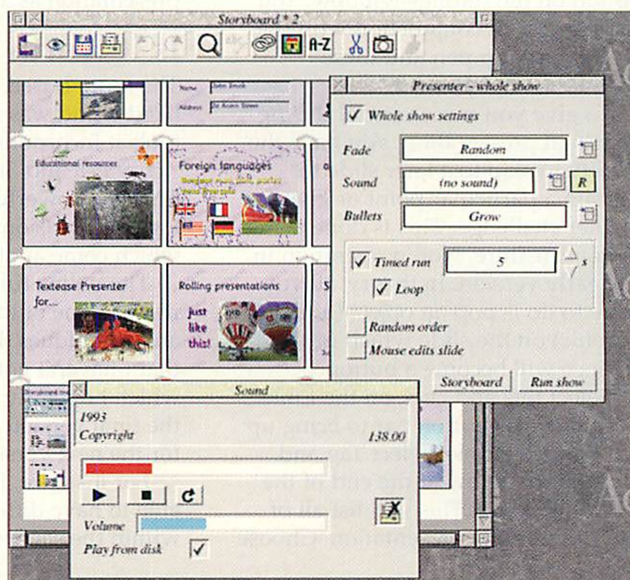
To have a consistency of design I wanted the same size and position of text and images. So having set up the background colour I pressed F7. This changed the cursor into a cross and allowed me to create text boxes. This frame is in place on each new slide as a guide. Frames are visible on the storyboard but not in the final show. However, when you drop a picture into a frame, it is supposed to expand to fit the frame, this was not working in my version unfortunately.

Having the template created you can now begin to add text, shadows, images, sound and video using the normal *Textease* tools as well as importing databases and spreadsheet information. When you want your next slide simply click on the next slide icon the tiled background will be waiting for you to work on.

When finished you can save your presentation as a presenter file, presenter template, drawfile, text, or HTML. All much simpler that I expected.

Using what's there

Working through the program with a small test group, some complained that the thumbnails were just too small. Talking about this we stumbled on the fact that you can resize these by simply dragging out the sizing arrows. The other thumbnails follow suit, but you do have less thumbnails on screen at



of paper so you can grab hold of images, shadows, images, lines and text and drag anywhere you want. Or for finer control selected text may also be moved fractionally with the arrow keys, or faster by holding down Control while using the arrow keys.

One of my favourite aspects is that text and images can be put on their side. Rotation automatically turns in steps of 15 degrees while for more precise you rotate in single degrees, by pressing Control while dragging the tag. And remember even when an object is rotated, it can still be sized and effects applied to it.

Text can be resized directly by highlighting a text box and pulling out or pushing in the corner. This gives you a more aesthetic edit that changing the font size via the Effects button. Either way you'll probably have to change the text wrap by moving the cursor to the left or right of the selection box until the word wrap cursor appears. Hold down Select and drag until your happy with the look. A point worth remembering is that if you hold down the Control key while dragging the text height and width can be stretched.

Colour is very important when creating a presentation and *Textease* has always allowed you to change colour very simply. But you can experiment easily with graded shades using the same text effect tools. Place the caret to the left of the text that is to be shaded then choose a colour. All the letters to the right will change colour.

Next move the caret to the left of the last letter and choose another colour, now select all the text and press Control+G. The letters between the two chosen colours will be evenly graded in colour. Shape colours can also be graded in this way too. You can also use this with a group of shapes, the trick here is to select them in order of grading.

Text and images don't have to sit in the boxes provided by the backdrops. You can add lines, rectangles, ellipses and polygons by clicking on the button bar. For rectangles and ellipses click on the work area to place the first position, move the pointer and click when the second position is found.

once having to scroll down to see them all. But one of my favourite tools in this surprising package is the *Active mark up*. This is used during a presentation to draw on the slides to emphasise a point, for instance. To access this facility right-hand click with the mouse and select the Pen and then a colour. Now draw on the screen, cease by right-hand click once more.These markings will not be saved though.

If you want to edit a slide during a presentation, for example to add answers to sums shown on the screen, click the *Mouse edits slide* option on the settings window. You can use this in conjunction with the active mark up pen and these additions can be saved.

To give you more control during an actual presentation, you have the facility to skip to a later slide to explain a particular point or give a greater challenge. This is done using the *Link* feature. Not in operation in my early version. In theory, all you have to do is pop an object (text or graphic) on the slide which in essence will become a button.

Select this and click on the Links button on the button bar to bring up the Links window. Select Tag and click on the arrow at the end of the Go to slide box. This will list all of the slides in the presentation. Choose the slide that the button should jump to. Simple and a nice point is that if you reorder slides after setting links, the buttons will still apply to the same slides, even if they are no longer in the same place in the show!

You can print the whole show or just the current slide and advanced printing allows you to print out *Speaker Notes* too. These can be added to each slide under the slide area, so you can see them on the editing screens but they are invisible during the actual presentation. There are a range of printing options including the chance to see your presentation as a pamphlet.

Is it worth the money?

The more I used *Presenter*, the more I liked it and was impressed by the tools it incorporated such as the *Active Pen* and *Speaker Notes* options. This is a powerful package but a logical extension to the facilities which come as standard in *Textease*.

The online tutorial is useful to reveal some of the powerful tricks and techniques. But this is not to say that I haven't got a few niggles which hopefully will be put right in the final version or be on a wish list for the next version.

For instance, I would like to be able to have different backgrounds within the same slideshow, but it appears that you must have the same background for all the slides although you can change background at any time during the editing process.

The bottom line has to be whether I would use it and what for. The answer is a simple yes as I can see myself using if for my own professional development as well as encouraging children to create their own shows and stories.

It fits well into the *Textease* stable and can be used for a range of applications and will appeal to a range of users especially with the facility - just like *Textease* - to change the look and range of icons depending on how you set up the program from the iconbar options as an infant, junior, senior, advanced or Textease Primary user. **END**

Product details

Product:	Textease Presenter
Ages:	7+
Price:	£39
Supplier:	Softease, Market Place, Ashbourne, Derbyshire DE6 1ES
Tel:	(+44/0) 1335 343421
Fax:	(+44/0) 1335 343422
Web:	www.textease.com
E-mail:	sales@softease.co.uk

Lines will snap to vertical or horizontal when you are within a few degrees of the vertical or horizontal. A rectangle may be snapped to a square and an ellipse to a circle, by holding down Control while dragging. If you change your mind before the object is completed, press Escape.

If you want the square or circle to hold its aspect ratio when you size it again, hold the Control key when sizing or set the shape to having a strong aspect which can be achieved if you enter the *Other* menu in the *Object* window.

Polygons are a little more complicated as you move and click where you want a vertex. You can leave the shape open if you prefer. You can further enhance this by selecting and then moving each point as in a drawing package. You can also curve the sides. Alternatively use this tool to make curved lines. If this seems too time consuming you'll be happy to know that there are pre-drawn polygons provided which can be sized in the same way as any object. Or why not flip or invert it? The choice is yours.

Rather than just have boxes of text and boxes of graphics why not run text around the pictures? Text can be repelled by any object. In the first place your object must be overlaying the text. Select the text and press F2 and the text will be repelled around one or more than one objects.

The amount of repel can be increased by selecting the text and pressing + on the keyboard or press – to reduce the gap. Why not experiment with text repelling text – they don't even have to overlap in the first place. But as well as layout and look *Textease* also provides some of the more advanced word processing facilities such as control over spacing, column wrap, indent tabs, margins and so on.

One of the more interesting aspects of *Textease* – especially for younger users – is the speech. Volume and speed of speech as well as the voice itself are controlled via the Text effect window allowing you to create a conversation altering the colour of the text as the words are said. All of these elements can be used within *Presenter* leading to innovate and interesting shows.

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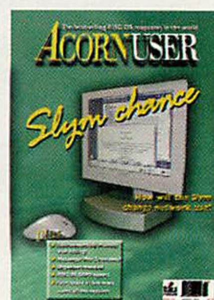
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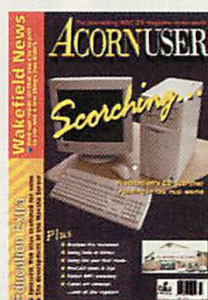
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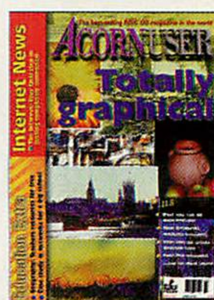
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Talk-back

In the August issue of *Acorn User* there were a number of articles which contained references to RISCOS Ltd and its products and plans for the future. This month we have an article from Paul on the plans for RISCOS Ltd plus a letter from him on those areas where he felt there had been errors.

On the subject of programmable ROMs, RISC OS has been released in three formats since RISC OS 3.7 First there was the Masked ROM which are pre-programmed at a factory. At present there is a six month lead time which, together with large minimum order quantities, make it unsuitable for use with RISC OS 4.

Re-programmble Flash ROM: This was the preferred choice for the launch of RISC OS 4. Ideally it would have been available in the same 42-pin package as the Masked ROMs, however despite appearing on product sheets they have never seen the light of day.

For the trials of RISC OS 4 surface mount Flash ROMs were mounted onto 42-pin carrier boards, which worked for most developers, but unfortunately proved to be incompatible with the wide variety of memory used in the bigger world which lead to odd behaviour from many applications. The original Flash ROMs were therefore replaced by One Time Programmable ROMs.

These ROMs are similar to EPROMs except that they can only be programmed once. This is the type that have been used for all the RISC OS 4 upgrades but supplies have been very limited in the last year and RISCOS Ltd have been warned that ongoing supplies from the one current supplier (OKI) are not guaranteed as most designers prefer Flash ROM. RISCOS Ltd have sufficient stock to last for the rest of the year.

Gareth Simpson stated in last month's issue that he felt that the delivery of a complete RAM-loadable ROM image would cause problems however RISC OS 4 has been totally RAM loaded with the latest Kinetic StrongARM cards and has not caused any problems.

Gareth also stated that he felt that the load ROM image and reboot sequence would be irritating. The good news is that on an SA RiscPC it takes about seven seconds for that sequence.

As far as replacing key elements such as the kernel a full replacement ROM image is the only choice as it avoids any doubt as to which patches should be used with any particular machine.

Potential problems with the different 4.03 operating systems is also a key reason why the softload scheme is ideal since RISCOS Ltd does not have to produce different physical ROMs for different machines, only different ROM images. If the wrong softload is attempted the user will not be left with a non-functional machine.

However users with machines with re-flashable ROMs might theoretically be able to reprogram them with an incorrect image. In practice the manufacturers are unlikely to let the end users reprogam their own ROM. It is something that is only likely to be allowed by a dealer. In fact it is probably better if the Flash ROMs are left so they are always available as a safe fallback to the original ROM setting if the user has problems with the RISC OS Select softload.

Expo-sition

On page 42 it was reported that David Atkins explained that the reason "why the Mico was late to market was nothing to do with MicroDigital as the pcb was first shown at the Wakefield Show in May 1999 yet the company did not receive a RISC OS licence until March 2000. You can draw your own conclusion as to why there was this delay."

The facts here are that MicroDigital received a first draft Heads of Agreement in July 1999. This was finally agreed in early November 1999. The final contract was signed by MicroDigital in early February 2000. But it was not until 9th March 2000 that a working Mico was submitted for product approval.

Apparently in my speech at the show I stated that there was no desktop market left and that I was very negative and offered no direction for desktop computers.

What I actually said was that the desktop market is changing and RISC OS must change as well. I compared the reality of the volume of sales that a company like Apple achieves and put the RISC OS market into perspective beside it, showing that while there are numerous things we would like to do with RISC OS, they must be restricted to those that have a commercial reality.

The RISC OS Select Scheme is just one change that will allow RISCOS Ltd to continue to offer updates to RISC OS that would otherwise simply not be possible. There is still a bright future for RISC OS and I hope to be making exciting announcements about that future in the forthcoming months.

Paul Middleton
RISCOS Ltd

Even more vikings

I read Graeme Shrimpton's letter in the September issue with some interest considering that I answered a similar question on one of Argonet's private groups recently. The only fault I find with the idea of using Javascript in this way is that some people can't, or won't, use Javascript.

Goodness knows that Acorn users generally were screaming for Javascript support not so very long ago, and many of us would complain bitterly to site writers about the non-standard way in which Javascript exists.

However, to cut a long story short, there is a way of doing this job in HTML without mucking about with Javascript or anything else.

It is a fact that web spiders used by spammers tend to pick on "mailto:" tags, but are not necessarily that good at handling unusual setups such as character definitions.

So if you were to declare your entire mail address as a character definition, you would stop a spammer pretty much dead unless they were really bloody-minded and worked out the address for themselves.

For example, a simple link such as **<A HREF="mailto:alpha@fake.com">** could be represented as shown in the yellow panel below.

The displayed address would still be handled by browsers to look as though it was correct, but if you were to look at the source, as a web spider would, it would show up as in this example.

I wrote a short program to do this. Yes, I know it is very basic! But it does the job, and you can also see how it is done — all you are really doing is taking the ASCII value in decimal, changing it to a string and adding "&#" onto the front and ";" on the end.

The way I use it is from a task window, so that I can then cut and paste the code directly into my pages. You can see an example of how this works at **http://crashnet.org.uk/contact.html**

Chris Johnson aka "Chika"
Romford

```
<A HREF="&#109;&#97;&#105;&#108;&#116;&#111;&#58;&#97;&#108;&#112;&#104;
&#97;&#64;&#102;&#97;&#107;&#101;&#46;&#99;&#111;&#109;">&#97;&#108;&#112;
&#104;&#97;&#64;&#102;&#97;&#107;&#101;&#46;&#99;&#111;&#109;</A>

PRINT "Enter email address to be munged " ;
INPUT ": "MUNG$
MUNGED$=""
FOR I=1 TO LEN(MUNG$)
  CHARA$=MID$(MUNG$,I,1)
  NEWCHARA$="&#"+STR$(ASC(CHARA$))+";"
  MUNGED$=MUNGED$+NEWCHARA$
NEXT
MAILTO$=CHR$(34)+"&#109;&#97;&#105;&#108;&#116;&#111;&#58;"
PRINT "This code can be added to your HTML (Cut text below line)"
PRINT "________________________________-"
PRINT "<A HREF=";MAILTO$
PRINT MUNGED$;CHR$(34);">"
PRINT MUNGED$;"</A>"
END
```

Wakarimas

I am one of the Japanese who read *Acorn User*. In Japan most people believe there's two personal-computer architecture (and operating system), PC/AT (Windows) or Macintosh (MacOS). Of course there was Japanese proprietary machines like NEC PC-98x1 and Sharp X680x0

A few Japanese know about Amiga, because an old TV programme used this to create CG animation. How about Acorn? I have heard only two rumours:

There was a company which would be a Acorn dealer, but they wouldn't because Acorn stopped manufacturing their machines. And a NetBSD developing team in Japan has some Acorn machines. I don't know whether these rumours are true or not. It is true that most Japanese don't know about Acorn and there's no information/web page.

I have seen the price of PC/AT is more expensive than in my country.

But many Japanese love very high performance machine. See **www.watch.impress.co.jp/pc/docs/article/20010622/enq17.htm** if you have Japanese-capable browser. This page shows the result of survey about PC/AT specs on 12,420 people in June.

It concludes that a Japanese owner has two hand-assembled desktop machines with Windows 2000, Pentium III 1GHz, 256MB memory, 20GB HDD and 17inch CRT, 1280x1024 pixels.

Of course not all Japanese use this configuration PC, but it is a evidence that they're high-spec oriented. I also like machines which have a power, but I know that is not always the best.

In issue 236, Michael Poole reported i-Mode cellular phone. There's another cellular phone system in Japan, it calls PHS (Personal Handy-phone System). I use PHS because it is cheaper than i-Mode and better voice quality. But even if i-Mode is expensive, it is very good terminal which can send e-mail, and surf Web pages. PHS can do same things, but the de facto standard is i-Mode.

Anyway, simply if you want to check Web pages (weather, traffic information, news and so on) and read e-mail, you don't need to turn on PC and wait for boot. You only have to press some buttons in your handy terminal.

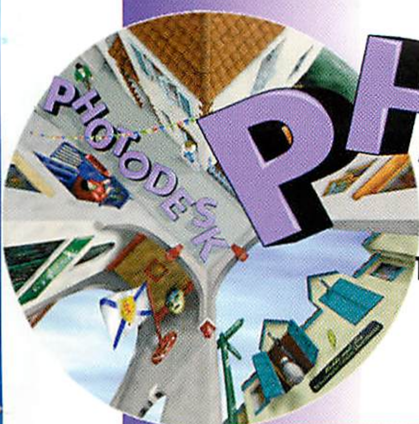
i-Mode is not a "machine" but a "tool", that is the reason why i-Mode succeeded, I think. I haven't seen/touched any RISC OS-based machine, but I have been reading *Acorn User* for a year, I feel this machine will be a good "tool". I want to check it is true, but it is hard for anyone who live in Japan to get any RISC OS machine.

Thank you for reading my poor English.

Sasano Takayoshi
by e-mail

Contacting AU

letters@acornuser.com



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PHOTODESK The studio quality image editing package is now available as a CD-ROM edition. It includes an HTML manual and in addition a CD of professional digital photos by David Cowell. It also includes the complete set of special effects plug-ins. This is the full CMYK/Layers version of Photodesk.

NOW ONLY £135.00

Upgrades: 2.xxL/Olymp: £100.00 2.xx/Olymp: £85.00 3L.xx/Olymp: £70.00 3.xx/Olymp: £20

Special Offer: Dave Cowells 2 CD Tutorials worth £49.98 with any Olympic or Olympic upgrade add only £25



BRAND NEW CD "STARTING POINTS" £25 (Not just RISCOS or Photodesk, ideal primer for general photo editing, artwork generation on any platform.



OHP 2 £40 (upgrade from 1.xx £13)

A presentation Package on CD-ROM:

Version 2 now has Powerpoint export.

OHP is a screen-based presentation package for use with RISC OS computers

OHP lets you compile Presentations comprised of a number of graphics files, which you create or purchase outside OHP, and show them on your computer's VDU as a full-screen presentation. OHP has facilities to order the graphics, give them consistent styling, add sound effects and help you present them to an audience. If you have access to an electronic projector, you can use that to project the presentation onto a screen.

The read-only version, OHP_Show (which is Freeware) can be given away with your presentations or used on any number of computers; this makes OHP presentations an ideal way of communicating or advertising.

NEW Prices

Camera prices are constantly changing, please phone me for a quote/ latest price

C860L	£220
C960Z	£320
C990Z	£420
C2040Z	£525
C3040Z	£790
C2100UZ	£750

OLYMPUS Cameras

All c... PhotoLink software Worth £69

C3040 Zoom 3.3Megapixel (2056x1528 pixels) 3x... ...ie feature, takes lens attachments, Manual as well as automatic... ...rnal flash. 16MB memory card and remote control standard...

C2100 Ultra Zoom 2.2 Megapix... ...ctronic TTL SLR with image stabilisation Ma... ...r external flash. 16MB memory card an... ...£750.00 inc.VAT and RISCOS sof...

C2040... ...eature, takes lens atta... ...for external flash. 8MB mem... ...OS. :£525.00 inc.VAT

C9... ...zoom, internal flash with 8MB memory card...

C96... ...om 2x digital zoom, internal flash with 8MB memory card £320...

C86... ...0pixels) 2x digital zoom, internal flash with 8MB memory card £2... inc.VA...

STOP PRESS STOP PRESS STOP PRESS
Olympus are discontinuing all serial port cameras: Please phone me for special offers on end of line cameras. e.g. C2100UZ only £595
Some refurbished ex demo cameras available at special prices!
New cameras have USB connectivity. Please contact me for latest developments/availability
STOP PRESS STOP PRESS STOP PRESS



C2100 Ultra Zoom



PRINTERS



NEW!

Canon S450 £150
Canon S4500 A3 £350
Canon S800 £375

All printers include PhotoReal software Worth £69

The S450 and S4500 are brilliant general purpose printers with separate ink tanks, the price includes a PhotoReal driver and a standard set of cartridges (4 colours) The printers may be upgraded to stunning photo-quality with the optional photo pack which includes a photo cartridge and pack of PR101 pro paper.(£55) Price of printers with photo pack: S450 A4 £199, S4500 A3 £399.

The S800 is Canon's top of the range photo printer, it uses the latest Canon six ink technology with superfine droplet size. The PhotoReal driver utilises the printers capability to produce really superb photographic output.

PLEASE ASK ME FOR BROCHURES AND SAMPLE PRINTOUTS

PhotoReal Printer Driver Software by PHOTODESK



LOOK £69 ...for PHOTODESK with any Camera, Scanner, or Printer!

INDEPENDENT EXPERT ADVICE

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FUJIFILM Kodak OLYMPUS SONY EPSON Canon
LEXAR Media CASIO RICOH Nikon MINOLTA SanDisk IBM.

DIGITAL CAMERAS

MAKE & MODEL	CAMERA	+16MB CARD	+32MB CARD
AGFA CL18	£60	N/A	N/A
AGFA CL34	£158	£178	£188
CANON Powershot A10	£278	£298	£308
CANON Powershot G1	£698	£718	£728
CANON Digital Ixus (300)	£468	£488	£498
CASIO QV2300	£525	£545	£555
CASIO QV2800	£525	£545	£555
CASIO QV3500	£428	£448	£458
CASIO QV3 PLUS	£598	£618	£628
COOL I-CAM	£47	N/A	N/A
FUJI MX1200	£160	£171	£179
FUJI Finepix 1300	£158	£169	£177
FUJI Finepix 1400	£228	£239	£247
FUJI Finepix 2300	£233	£244	£252
FUJI Finepix 2400	£271	£282	£290
FUJI Finepix 40i	£398	£409	£417
FUJI Finepix 4700	£420	£431	£439
FUJI Finepix 4800	£478	£489	£497
FUJI Finepix 4900	£548	£569	£577
FUJI Finepix 6800	£544	£555	£563
FUJI Finepix 6900	£628	£637	£645
KODAK DC3200	£134	£154	£164
KODAK DC3400	£268	FREE	£338
KODAK DX3500	£248	£268	£278
KODAK DX3600	£308	£328	£338
KODAK DC3800	£268	£288	£298
KODAK DC4800	£464	£484	£494

MAKE & MODEL	CAMERA	+16MB CARD	+32MB CARD
KODAK DC5000	£458	£478	£488
MINOLTA E201	£258	£278	£288
MINOLTA Dimâge 5	see website	see website	see website
MINOLTA Dimâge 7	£868	FREE	£898
MINOLTA S304	see website	see website	see website
NIKON Coolpix 995	£718	£738	£748
NIKON Coolpix 995 Premier	£808	£828	£838
OLYMPUS C1	£212	FREE	see website
OLYMPUS C1 Zoom	£268	FREE	see website
OLYMPUS C200	£308	FREE	see website
OLYMPUS C700	£528	N/A	FREE
OLYMPUS 860	£198	FREE	see website
OLYMPUS 2040	£365	FREE	see website
OLYMPUS 3040	£678	N/A	FREE
OLYMPUS 4040	see website	N/A	FREE
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PENTAX EI2000	£648	£668	£678
RICOH RDC7	£448	£459	£467
RICOH RDCi500	£568	£588	£598
SONY MVC FD75	£348	see website	see website
SONY MVC FD87	£455	see website	see website
SONY MVC FD90	£638	see website	see website
SONY MVC FD92	£548	see website	see website
SONY MVC FD95	£748	see website	see website
SONY P1	£598	see website	see website
SONY DSC-F505V	£738	see website	see website

READERS AND ADAPTERS

LEXAR USB Smartmedia reader	£28
SANDISK Compact Flash USB reader	£27
SWIFT USB Compact Flash reader	£36
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SMART MEDIA

FUJI 8MB	£12.50
FUJI 16MB	£15
FUJI 32MB	£24
FUJI 64MB	£40
FUJI 128MB	£79
SANDISK 16MB	£18
SANDISK 32MB	£28
SANDISK 64MB	£46
SANDISK 128MB	£96
TOSHIBA 64MB Smartmedia card	£42

COMPACT FLASH (TYPE I & II)

IBM 340MB microdrive	£191
IBM 1GB microdrive	£343
SANDISK 8MB	£20
SANDISK 16MB	£22
SANDISK 32MB	£32
SANDISK 48MB	£46
SANDISK 64MB	£56
SANDISK 96MB	£88
SANDISK 128MB	£98
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4 x 1200mAh	£6.50
4 x 1800mAh	£11.50
4 x 1200mAh & mains charger	£16.50
4 x 1800mAh & mains charger	£20.50

All prices include vat (and delivery for orders over £100)

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